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BUTLER'S ELEMENTARY GEOGRAPHY

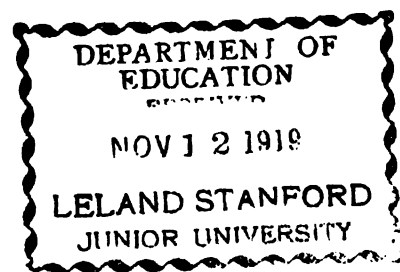


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A LESSON IN MOULDING.

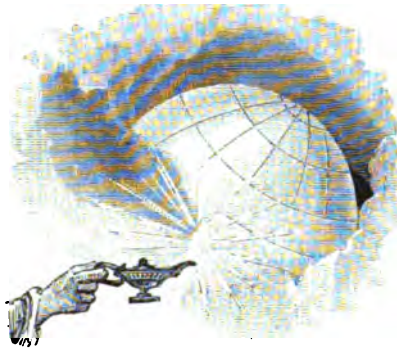
(See p. 122.)

BUTLER'S GEOGRAPHICAL SERIES

BUTLER'S

ELEMENTARY GEOGRAPHY

By JACQUES W. REDWAY



E. H. BUTLER AND COMPANY

PUBLISHERS

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PREFACE.

BUTLER'S ELEMENTARY GEOGRAPHY is the introduction to the author's COMPLETE GEOGRAPHY. It is designed as a preliminary treatise, and has been arranged especially for the use of pupils in the primary and intermediate grades.

It has been the aim to make this a manual of object lessons, of reading, and of class exercises. It has, therefore, been profusely illustrated with pictures, relief maps, and political maps.

The illustrations are mainly by Misses Alice Barber and Agnes Watson, and Messrs. Lummis, Stephens, and Faber,—all of whom are widely known in connection with the illustration of children's literature. Every picture is an excellent object lesson.

The text has been arranged to meet the desire which is now almost universal among teachers of geography,—a reading description supplemented by a review-lesson. A casual glance will show that the descriptive text may be used either as a reading-lesson or for topical recitation. When pupils are sufficiently mature, the latter method is recommended. The map questions are so arranged that they may be used either as a drill exercise with the maps, or as an introduction to each subject in the text. The wise teacher will adopt both methods, and temper them with judgment.

This is the first text-book to introduce the moulding-board in teaching geography, and a chapter containing copious directions is appended. In order to assist both teacher and pupil, photo-gravures of large models of the continents accompany the directions. These models have been prepared by the most skillful topographical modeler living. Except a slight vertical enlargement, they are made exactly on scale.

In the preparation of the chapters on topographical moulding, as well as in selecting much of the material of the text, the author acknowledges the services of Mrs. N. R. Baldwin, a teacher widely known as a representative of the New Education.

J. W. R.

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GEOGRAPHY.

THE SHAPE AND SIZE OF THE EARTH.

1. The earth, or world, is a great round body, which, with many others like it in shape, is forever whirling around the sun.

2. The outside or surface of the earth is the part on which we live, and this book is a story of the earth and the things upon its surface.

3. It tells about the people that live upon the earth, about their manners and customs, and about the countries in which they live.

4. It tells also of the animals that live upon the land and in the sea, and of the plants that grow upon the earth.

5. The study of the earth, and of the people, animals, and plants that live upon its surface, is called **Geography**.

6. A great many years ago, before much had been learned about the shape and size of the earth, it was thought to be a vast plain, in the middle of which was a large sea.

7. Even the wisest men thought that if one were to travel far enough he would come to the end of the world.

8. But as time went by, and people traveled farther and farther away to find new homes, some of them began to think that the world was not the vast plain they had supposed it to be.

9. One of these men was Columbus. He had been a sailor all his life, and had many reasons for thinking that the world was round. And because he felt sure that he was right, he made a voyage over an unknown part of the sea and found a new country.

10. There was another bold sailor, named Magellan, who sailed westward from the shores of Spain

with five stout ships and their brave crews. The vessels were soon out of sight, and it was many months before they were again seen.

11. One morning, however, the people in Seville heard the boom of cannon in the harbor. Many ran to the dock to learn what had happened. There, riding safe at anchor, were the ships of Magellan.

12. Day after day and month after month Magellan had sailed westward until his ships reached the place from which he started. They had sailed around the world.

13. It is more than three hundred years since Magellan made his famous voyage. Since that time many other people have traveled around the world, visiting countries of which Columbus and Magellan never heard.

14. From these travelers we learn about mountains which pour out melted rock and fiery gases, and of springs which shoot boiling water high into the air.

15. They tell us also of rivers which have cut their channels more than a mile deep through solid rock, and of vast rivers of ice which flow so slowly down the mountain-side that their motion can hardly be noticed.

16. They tell us of countries so warm that flowers bloom there all the year, and of lands so cold that the ice and snow never melt, where sunlight does not fall upon the gray mountains of ice for six long, dreary months.

17. Far away from these lands are others where no cloud ever crosses the sky, where never a drop of rain falls, where not a single blade of grass grows, and where the fierce rays of the sun beat down upon vast plains of hot, burning sand.

18. The brave men who have spent their lives in traveling have also found many kinds of people in their wanderings. Some of these have white skins, some brown, and some black.

19. Some live in cities and towns, like those of our own country; others live in huts made of mud. Some are educated and refined; others are rude and ignorant.

20. It is no wonder that men used to think the world a flat plain, for it is so vast that one can see only a little of it, and the curving of the surface does not show.

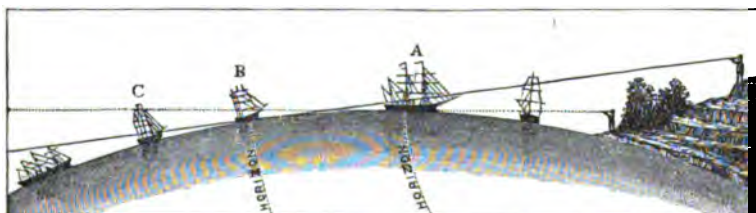
21. Even when we stand on the edge of a high cliff and look out upon the sea it seems to be nothing more than a plain of water, flat and level as far as the eye can reach.

22. But if we look carefully, we may find a very good proof that we are not looking at a flat surface. Let us watch a ship as it leaves the harbor to sail away to some other land.

23. As the vessel speeds away from the harbor, by and by her hull or lower part seems to sink out of sight into the water.¹ Now let us look through a spy-glass, which makes the vessel appear much nearer than she really is.

24. In a little while we no longer see the hull, but only a few white sails, and as we look again and again these seem also to be sinking out of sight. By and by only the tops of the masts are in sight, and at last these disappear.

25. It is the same when a vessel returns to the harbor. At first only the tops of the masts can be seen, and then the sails; last of all the hull comes into sight.



Curvature of the Earth's Surface.

26. There is still another proof that the world is round. Sometimes the earth passes between the sun and the moon. Whenever this happens we may see the earth's shadow on the moon.

27. Now, if the earth had any other shape, its

shadow would not in every case be round, for nothing but a globe can always have a circular shadow, and the earth's shadow is always a circle.

28. Although the earth is smaller than any of the stars we see on a clear night, yet it is so large that we can have but a slight idea of its vast size.



Day and Night.

29. If a traveler were to start from New York² and ride night and day around the world, at the speed of a mile every minute of time, it would take him more than two weeks to reach New York again.

30. Such a journey as this would be twenty-five thousand miles long, or if one could go right through the centre of the earth he must travel eight thousand miles before reaching the other side.

31. Not only are we sure that the earth is round, but we know also that it is moving all the time. It spins round and round in much the same way as a top does, and it also moves around the sun.

32. The first of these motions causes the change from day to night. In the picture above we may see how day follows night, and how night again comes after the day has gone.

33. The lamp represents the sun, and the ball through which the pencil has been thrust we may think of as the earth. We see that the light shines bright upon the side of the ball next the lamp, while the side away from the lamp is dark. It is day on that part of the ball where the light falls, and night on the side away from the light.

34. Now, if we spin the ball on the pencil, it will bring every part of the ball in turn before the light, and then away from the light.

35. The earth spins or turns in just the same manner. It is day wherever the sunlight falls on the earth, and night in the part turned away from the sun. When we first see the sun in the morning, it is **sunrise**; when the sun is half-way across the sky, it is **noon**, or midday; when it goes down in the evening, it is **sunset**.

36. The imaginary line on which the earth spins or turns is called its **axis**, and the ends of the axis are called the **poles**. The axis of the earth points towards the north star. The pole next the north star is called the **north pole**; the opposite, the **south pole**.

37. We may learn from this that when it is noon at one place it may be before noon at another, and after noon at still another. When it is noon at London, the people in Chicago see the first rays of sunlight in the morning. The people in India are perhaps watching the sun as it goes down in a bank of golden clouds while those in Australia are in the darkness of midnight.

38. It takes a little more than 365 days and nights for the earth to make a journey around the sun, and this space of time is called a **year**. While the earth is making this journey the sun's rays fall more directly upon some parts of the earth than upon others. Because of this we have the changes from summer to autumn, winter, and spring.

¹ From the deck of a vessel we cannot see the surface of the water at a greater distance than five or six miles. The hull of another vessel can be seen a little more than twice as far, while the sails may be seen thirty-five or forty miles away. The line where the sea and sky appear to meet is called the **horizon**. The cut on page 6 shows that a person standing at a height above the water can see much farther away than one standing near the water's level. The man standing at the sea-level can see the upper sails of B, and all of A;

39. There is a broad belt around the earth midway between the poles, where the sun's rays beat full and strong and the rain-clouds pour down copious showers. Here it is always summer, and everywhere the hills and valleys are clad with green leaves and bright flowers. This belt is called the **torrid zone**.

40. On each side of the torrid zone are belts called the **temperate zones**. In these zones the warm summer is followed by a cold winter. The summer days are long, the winter days short. It is in these zones that most of the wheat, corn, and fruit grows, and it is here that the ox, horse, sheep, and other useful animals abound.

41. Here live the most enlightened, the bravest, and the most industrious people in the world, and it is here that we find most of the great cities, the railways, and the factories.

42. Around the poles are the cold, desolate **frigid zones**. In these zones the cold is so great that the ground is always covered with ice and snow. But

few plants are ever found here except the mosses that grow in the frozen swamps, and about the only large animals that exist in this cold region are the white bear, whale, and seal.

43. The people living in the frigid zones are so short and stunted that they look like half-grown people. They dress in fur clothing, and many of them live in huts made of snow.

the man standing on the high cliff can see the whole of A and B and the upper sails of C.

² The journey around the world is now made every year by thousands of people, and excursions leave New York and London almost daily. The entire journey may be made by steamship and rail. Magellan was about three years making his famous voyage, but at the present time the journey can be made in seventy-two days, or in even a shorter time.



Zones and their Products.

REVIEW LESSON.

What does geography teach?

Geography tells about the surface of the earth, and the people, animals, and plants that live upon it.

What is the earth?

The earth is a planet, much like the stars we see in the sky on a clear night.

What is the shape of the earth?

The earth is round like a globe.

What proofs have we that the earth is round?

Men have sailed round it, and its shadow is always a circle.

How is it shown by a vessel sailing from port?

When a ship leaves port, the lower part of the vessel first disappears, then the sails, and finally the tops of the masts sink out of sight.

What is said of the size of the earth?

The distance around the earth is nearly 25,000 miles; the distance through it is about 8000 miles.

What motions has the earth?

The earth turns or spins like a top. It also whirls around the sun.

What does the first of these motions cause?

The first motion causes the change from day to night and from night to day.

What are meant by day and night?

It is day on that part of the earth where the sun shines, and night on that part which is turned away from the sun.

What is the axis of the earth?

The axis of the earth is the imaginary line on which the earth spins.

What are the ends of the axis called?

The ends of the axis are called the poles.

In what length of time does the earth turn on its axis?

The earth turns on its axis in one day* of twenty-four hours.

In what length of time does the earth make the journey around the sun?

The earth makes a complete journey around the sun in 365 $\frac{1}{4}$ days.

How are the poles named?

The pole next the north star is called the north pole; the opposite, the south pole.

What is the torrid zone, and where is it situated?

It is a broad belt around the earth midway between the two poles.

For what is the torrid zone noted?

It is always hot and generally moist in the torrid zone.

Where are the frigid zones?

The zones surrounding the poles are called the frigid zones.

What is said about the frigid zones?

The frigid zones are very cold, and are always covered with ice and snow.

What is said about the people of the frigid zones?

The people of these zones are stunted in growth. Many of them live in huts made of snow.

Where are the temperate zones?

The temperate zones are between the torrid and the frigid zones.

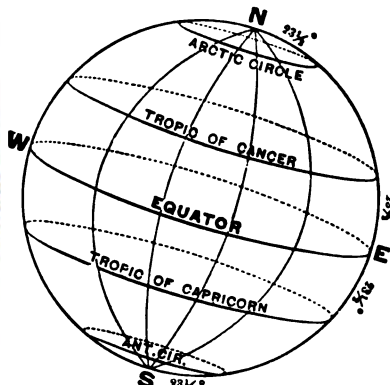
What is said about the temperate zones?

The summers are warm and the winters cold.

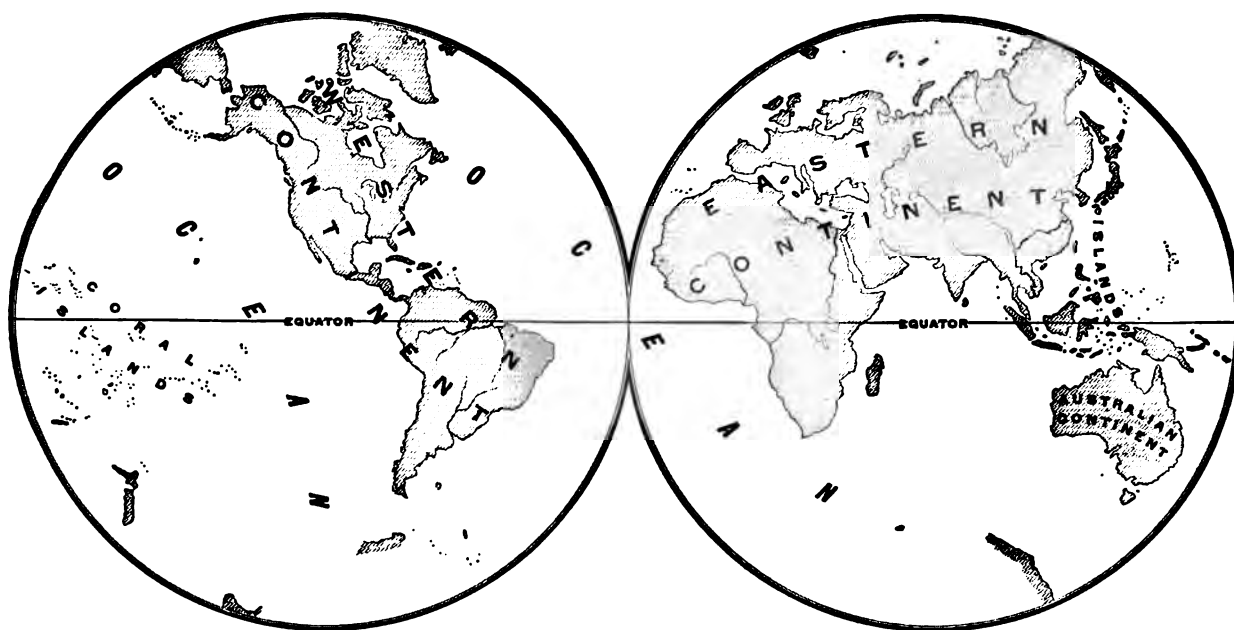
For what are the temperate zones noted?

Almost all the great nations of the world are in the temperate zones.

* A day also includes the night. Ordinarily the day begins at twelve o'clock midnight.



Zones and their Boundaries.



Land and Water.

FORMS OF LAND.

1. It is thought that a great many years ago the earth was a melted mass of matter, and that in time it cooled until a hard crust had formed on the outside.

2. The surface of this crust was not smooth like that of an apple, but in many places high ridges and deep valleys were formed while it was cooling.

3. Nearly all the deeper valleys and places were by and by filled with water, and only the higher parts remained in sight. That part of the earth's surface which is above the water we call the land, and it covers a little more than one-fourth of the globe.

4. Most of the land is clustered around the north pole, and if we look on a globe we see that it reaches southward in three directions. Notice, too, that all these masses of land are broad in the north and grow narrow towards the south.

5. There are three large masses of land and a great many smaller ones. The three large bodies of land are called **continents**; the smaller ones are called **islands**.

6. The Eastern Continent is the largest body of land. It is twice the size of the Western, and ten times as large as the Australian Continent. Notice,

too, that both of the larger continents are nearly cut in two by the ocean.

7. During past ages the face of the earth has changed much. For many thousands of years water and ice have been constantly wearing off the rugged tops and sides of the highlands and carrying their substance to the valleys below.

8. The land upon which we look would not seem so beautiful if it were flat, or if all parts of the surface were alike. Almost everywhere we see that it varies, being in some places low and level, in others high and uneven.

9. If we could look down on the earth from a great height we should see vast ridges extending along the surface of the land. Almost always they are near the sea, but in some places they are a long way from it.

10. These ridges are called **mountain-ranges**. They are immense wrinkles or folds, made by the shrinking of the earth's crust while it was cooling.

11. Generally there are many wrinkles or ranges close together. Look at the relief map on p. 123, and you will see how many of these ridges are side by side. A number of ranges, forming a great highland, is called a **mountain-system**.

12. The top of a mountain-range is its **crest** or **summit**; the sides are called **slopes**, and the land on which the range rests is its **base**.

13. The slope of a mountain-range is sometimes quite steep, but often it is gentle. In going up the eastern slope of the Rocky Mountains, it seems as though we were riding on a level plain instead of climbing a high mountain, and even when we reach the summit it is hard to think it the top of a mountain-range, almost two miles above the sea.

14. Where ranges of mountains lie side by side the space between them is called a **valley**. A very wide valley is often called a **basin**. A notch in the crest of a range of mountains is called a **pass**.

15. In some places a part of the summit of a range extends much higher than the rest of the ridge. It is then called a **mountain-peak**.

16. Some of these peaks are very high. Mount Everest, a peak of the Himalaya (*him-ā'li-ā*) Mountains in Asia, is almost six miles high; it is the highest mountain in the world. Some of the mountain-peaks in our own country are nearly four miles high.

17. When we go to the top of a high mountain-range, we find that the air grows colder and colder as we near the summit. By and by we reach a height where it is so cold that ice and snow remain there all the year. Even in the torrid zone there are mountains so high that at their tops it is winter all the time.

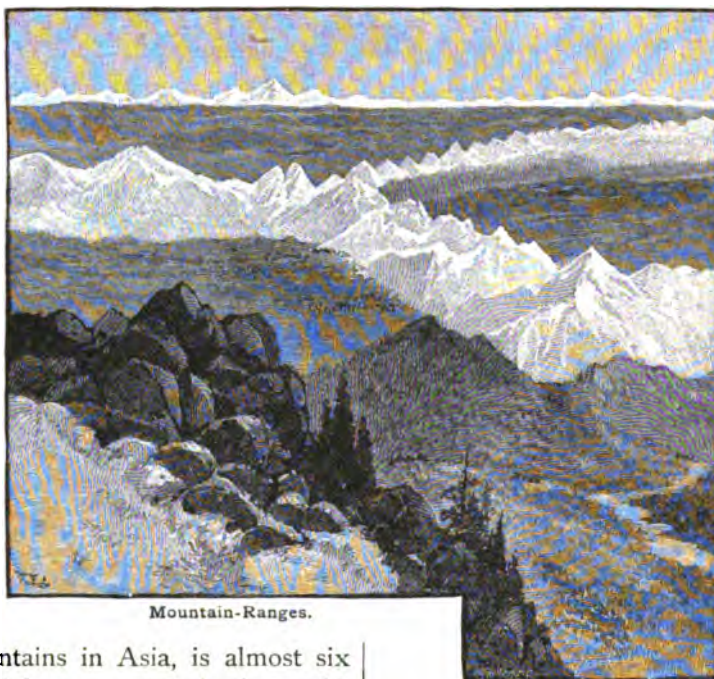
18. It may seem strange to learn that our fertile fields, covered with waving grain, would be dry, sandy deserts if it were not for mountain-ranges, but yet it is true. Let us see why.

19. The warm winds which blow over the land

contain a great deal of moisture, and it is the moisture from these winds that is poured down on the earth in the form of rain.

20. Now, unless the warm air is cooled, it will keep all its moisture; and were it not for the mountains, these winds would pass over the land without leaving a drop of rain.

21. But the high mountains, with their snowy crests, cool the winds. Great banks of clouds gather and send down floods of rain which water the earth and fill the river-channels.



Mountain-Ranges.

22. Each of two of the continents, the Eastern and the Western, has a vast mountain-system extending its whole length. Except in few places these continents have no lack of rain, while rivers flowing in all directions carry off the water from the mountains to the sea.

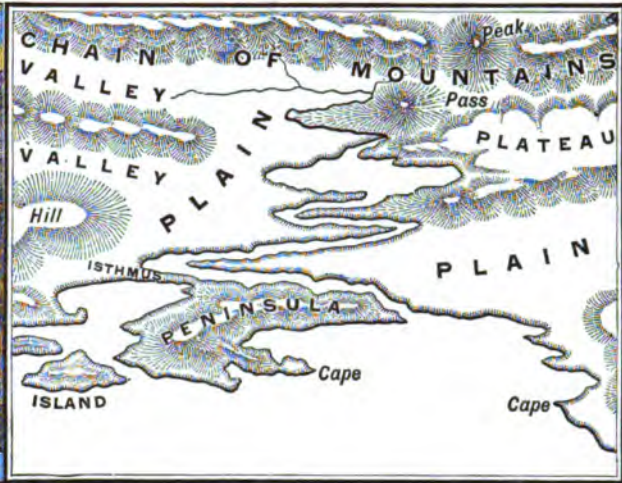
23. The Australian Continent has no high mountain-system, and, for want of it, the greater part will always be a desert. If there were a range of high, snow-capped mountains to deprive the hot winds of their moisture, Australia would be one of the most fruitful countries in the world.

24. There are some mountain-peaks which are interesting because they tell us about the interior of the earth. Many of these peaks are in high mountain-ranges; others are on level ground; and a few of them rise out of the sea. They are called **volcanoes**.

25. Looking at one of these peaks from a distance, it appears like a cone-shaped mountain whose top has been cut away. Clouds of smoke are coming out of the top, and perhaps one may see what looks like a stream of fire flowing down the side.



Picture of Forms of Land.



Map of Forms of Land.

26. Let us climb to the top of one of these volcanoes. All along its base, fruit trees and vines are growing. By and by we come to the steep, bare sides of the volcano. Here we must clamber over ashes, loose stones, and rough black rock that looks like the cinders and slag from a furnace.

27. As we near the top the ground is hot, and down in the chinks we can see that the rock is glowing. Here and there puffing out of little holes are steam and vapor smelling like brimstone. The ground shakes beneath our feet, and a low, rumbling sound is heard above the hissing of steam.

28. Finally we reach the summit. Here, instead of the flat top, as it seemed to be when viewed from below, we find a vast, cup-shaped pit. This pit is the **crater** of the volcano, and it is the upper end of a channel that reaches to the hot interior of the earth.

29. Far down in the bottom of the crater, through the stifling vapors, we can see what looks like a lake of fire. The white-hot liquid which forms this lake is melted rock, and is called **lava**. Every few minutes a huge bubble forms, and, bursting, sends a shower of lava high into the air.

30. In some volcanoes this has been going on for hundreds or perhaps thousands of years. Sometimes the melted rock will rise up in the crater until it flows over the edge and a stream of lava runs down the mountain-side; but oftener it only seethes and bubbles at the bottom.

31. There are some volcanoes that for many

years show no signs of what they are. Their sides and tops are perhaps covered with forests, or with vines and flowers. Then without warning the top of the mountain is blown out with a frightful noise.

32. Huge rocks are hurled into the air; streams of lava pour down the sides of the mountain; and vast showers of ashes fall upon the plain below, burying cities and destroying every living thing.

33. The rock and much of the ashes fall on the sides of the volcano, building it up often to a great height. By and by, however, the flow of lava stops, and nothing escapes but clouds of vapor. Finally these cease to appear, and the volcano becomes quiet.

34. Many of the highest peaks in the world are volcanoes, and all volcanoes are near the ocean. Indeed, the largest ocean has a belt of volcanoes reaching almost 20,000 miles along its shores.

35. There are some highlands which are not always level, and yet are not mountainous. These highlands are called **plateaus**. In a few cases the plateau is the flat top of a mountain; it is then called a **table-land**.

36. Most of the plateaus of the Eastern Continent are in the central part, a great distance from the ocean. In the Western and Australian Continents all the large plateaus are near the ocean.

37. One of the most wonderful plateaus is in the western part of the United States. It is called the Great Basin, and is nearly a mile high. It has been so named because it is walled in on all sides by

high mountain-ranges. The highest plateau in the world is the Plateau of Thibet, in the Eastern Continent. It is more than two miles high.

38. The wide stretches of lowland are called **plains**. The surface of plains is sometimes level, but oftener it consists of low swells, extending, one after another, as far as the eye can reach.

39. The largest plain is in the northern part of the Eastern Continent. It extends from east to west a distance of nearly 6000 miles. There are

two large plains in the Western Continent, each almost 3000 miles long.

40. Some of these plains are made by the rivers. A river which begins high up in the mountains flows so swiftly that the water wears away a great deal of rock and spreads it out on the valley below.

41. Many of the larger plains, however, were once covered by the sea, but after a time the sea-bottom was pushed up out of the water. It was in this way that all the largest plains were formed.

REVIEW LESSON.

What is thought about the former condition of the earth?

It is thought to have once been a molten mass.

What is said of the crust that formed by cooling?

The crust that formed on the outside by cooling was rough and uneven.

With what is most of the earth's surface covered?

Most of the earth's surface is covered with water.

What is the part above the water called?

The part of the surface which rises above the water is called the land.

What part of the earth's surface is land?

The land forms a little more than one-fourth of the earth's surface.

Where is most of the land situated?

Most of the land is in the Northern Hemisphere.

How are the bodies of land designated?

The three largest bodies of land are called continents; the smaller ones, islands.

Name the continents.

They are named the Eastern Continent, the Western Continent, and the Australian Continent.

What is said of the size of the continents?

The Eastern Continent is twice as large as the Western Continent, and ten times as large as the Australian Continent.

How has the face of the earth been changed?

The face of the earth has been greatly changed by water and ice which have worn off the tops and sides of the highlands.

How is the surface of the land varied?

The surface of the land is varied with mountains, plateaus, plains, and valleys.

What is a mountain-range?

A mountain-range is a ridge or fold in the earth's crust.

What is a mountain-system?

A mountain-system is a number of ranges which form a great highland.

What is a mountain-peak?

A mountain-peak is a part of the crest which is higher than the rest of the range.

How do mountain-ranges benefit the land?

Their high crests take the moisture from the winds, and it falls as rain on the land.

What is a volcano?

A volcano is an opening in the earth's crust through which steam, gases, and lava are poured forth.

How are volcanic mountains formed?

A volcanic mountain is built of the matter thrown out of the volcano.

What is the crater of a volcano?

The crater of a volcano is a cup-shaped hollow at the top of the mountain.

Where are most volcanoes situated?

Nearly all volcanoes are situated near the sea. The Pacific Ocean is nearly enclosed by a chain of volcanoes.

What is a valley?

A valley is the low land between mountain-ranges or hills.

What is a plateau?

A plateau is a vast highland extending many miles in length and breadth.

What is a plain?

A plain is a level or nearly level tract of lowland.



ISLANDS.

1. All along the borders of the continents, and in some places far away in the ocean, are bodies of land rising out of the sea. These bodies of land, as we learned in another lesson, are called islands.

2. Some of these islands are very large, and some are small; some are low and level, but many are rugged, and some have high mountains. Let us look at the map, page 34, and learn something about these islands.

3. Notice that a chain of islands stretches all along the eastern coast of the continent, and that only in a few places the sea breaks through the chain so as to leave a wide gap.

4. Turning to the map on page 32, we see another chain reaching many hundreds of miles into the ocean. This chain of islands is almost like a bridge stretching from one continent to another.

5. The islands are long and narrow, and one or more ranges of mountains extend the whole length of each. From this we can readily understand that these island-chains are nothing more than mountain-ranges whose crests, in places, are lower than the sea-level.

6. These islands are much like the continents along whose shores they stretch. Almost always the plants and the animals are of the same kind as those on the neighboring continent. Most of the volcanoes in the world, too, are on these islands.

7. A great many miles from land, in the widest part of the ocean, there are clusters of islands which have a wonderful story. These islands are small in size and seldom more than ten or twelve feet above the sea-level.

8. The strangest thing about them is that they have been built by little animals, no one of which is larger than a small flower. Indeed, coral animals or polyps look like flowers, and thousands of them are clustered on what seems to be a tree. But the tree is of stone, and the ring-shaped forest of these trees makes the coral island.

9. The coral polyp when it has just been hatched from the egg is a little drop of jelly, hardly as large as the head of a pin. In the torrid zone, and in many other parts of the ocean where the waters are warm, millions of these little jelly-drops, the infant coral polyps, are born every day.

10. They float near the surface, and are driven about by winds and waves. Many of them perish, but some finally lodge against the rocks that fringe the shore. Here they fasten themselves to the rocks, just below the surface of the water.

11. Soon the little polyps grow upwards, each like a tree. As each coral tree grows higher, other little polyps sprout out from the trunk and the branches, just as buds and flowers grow upon the branches of a tree.

12. All this time they are taking limestone from the sea-water, and building the coral-tree higher and larger. Thus they continue until the branches of the trees grow together, and the fringe of coral around the rocky island becomes a ring-shaped wall reaching to the surface of the water.

13. As day by day the sea beats against the wall of coral, pieces are broken off and piled up in just the same way as bars of sand and gravel are heaped up along our own coast by storm-waves.

14. After a while seeds and budding twigs are washed upon the island, or perhaps are scattered over its surface by birds, and finally it is covered with plants and trees.

15. Some of the coral islands are long fringes lying close to the shore of a continent or another island, but many of them are irregular rings which shut in a shallow lake.

16. In some of the islands the ring is broken in one or more places; in others there is no inlet to the lake. These islands are called **atolls**; the lakes they enclose are named **lagoons**.

17. We can readily guess that only a few kinds of plants are to be found on coral islands. In fact, there is little else beside the cocoa-palm and the bread-fruit tree.

18. People who have visited these islands tell us that the place where they are clustered was once a plateau, on which there were a great many mountain-ranges. In time this plateau sank, leaving only the tops of the high mountain-peaks out of water.

19. Then the coral polyp began building around the sides of the mountains, and, as the mountains kept sinking, the coral forests were built upwards, always keeping near the surface. By and by the mountains sank entirely beneath the sea, and now an atoll marks the place where once there was a mountain.

REVIEW LESSON.

What is an island?

An island is a small body of land entirely surrounded by water.

What are continental islands?—oceanic islands?

Islands near the continents are called continental islands. Those at a great distance from land are called oceanic islands.

How are continental islands situated?

Continental islands almost always form long chains, which lie near the shores of the continents.

Of what do such chains of islands consist?

They are the peaks of mountain-ranges which in only a few places reach above the sea.

What is said of the plants and animals of continental islands?

The plants and animals of continental islands are much like those of the continents near them.

What is said of the size and position of oceanic islands?

Most of the oceanic islands are small, and are at a great distance from any large body of land.

What is their shape?

They are usually, in shape, like a ring broken in several places.

What are the island and the enclosed water called?

The ring-shaped island is called an atoll; the lake which it encloses, a lagoon.

Of what are atolls composed?

Atolls are composed of limestone, and were formed by the coral polyp.

What were the atolls at first?

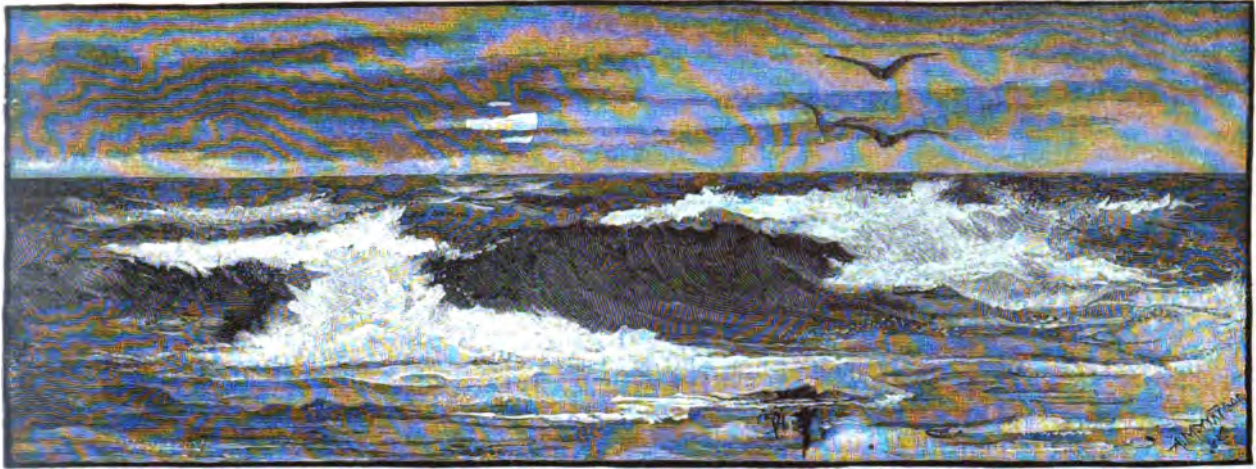
Coral atolls were once reefs built on the sides of volcanic mountains.

How did they become coral islands?

The whole region sank slowly, and as it disappeared beneath the sea the coral polyps built higher, keeping always near the surface.

What plants are found on coral islands?

About the only plants are the cocoa-palm and the bread-fruit tree.



The Ocean.

THE OCEAN AND ITS SHORES.

1. The vast body of water which covers most of the earth's surface is called the sea or ocean, and it is almost three times as large as the land. The southern half of the earth is nearly all covered with water, while in the northern half wide passages of the sea separate the continents.

2. If you look at a globe, you will notice that around the north pole a part of the ocean is almost shut in by the land, and that there are only three narrow channels leading out of this landlocked sea.

3. Around both of the poles the sea is forever hemmed in with vast fields of ice, but in the torrid zone the water is always warm, and the winds that blow over these waters help to warm the distant and colder lands.

4. The bottom of the ocean is not unlike the surface of the land. There are plains and plateaus, many times larger than those on the land. Near the continents are high mountain-ranges, and in the widest part of the ocean is a plateau upon whose high peaks the coral islands are built.

5. The water of the ocean is salt and bitter, because of the great amount of salt it has dissolved from the rocks. In mid-ocean every one hundred pounds of water contains about three and one-half pounds of salt. In the polar oceans the water is comparatively fresh, but in many of the landlocked seas it is very salt.

6. In many places the sea is nearly three miles deep, but a few places have been found where it is more than five miles deep. These very deep places, strange to say, are not in the middle of the ocean, but near the land.

7. In the deep parts of the ocean a slimy mud covers the bottom to a great depth. This slime is made up of the shells and skeletons of animals so small that several thousand of them together would not be so large as the head of a pin.

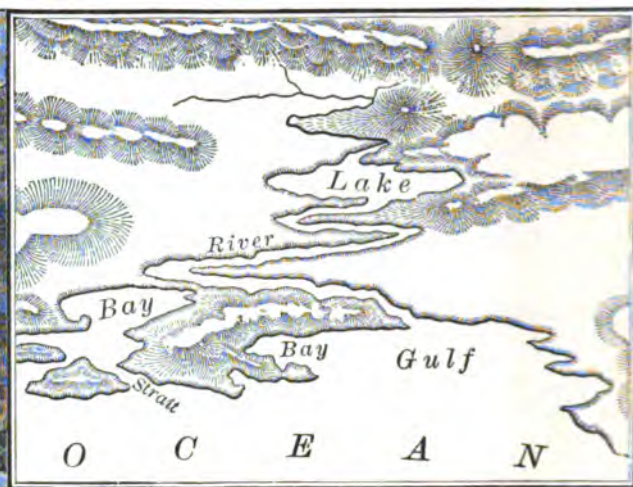
8. After many thousands of years these shells and skeletons will be pressed into solid rock. The chalk we use in the school-room has been formed in this way; and in digging into the earth, whenever we find a layer of chalk we know that some time in the past the sea covered that place.

9. Almost everywhere the waters of the ocean are of a deep-blue color, but in shallow places they are of a pale green. The warm waters of the torrid zone often glow with a pale light, and if the waves break into foam the sea is lit up as far as the eye can reach. This is caused by very small animals, which, like the fire-fly, give out light.

10. The water of the ocean is never at rest. Even when there is not a breath of wind, the water is always heaving and tossing. In pleasant weather the waves are small, but in storms the billows are sometimes forty or fifty feet high.



Picture of Forms of Water.



Map of Forms of Water.

11. If we stand on the sea-shore, we shall notice that the surface of the water is gradually changing in height, either rising or falling.

12. Twice every day it is high, and twice it is much lower. This change is called the tide. The tide is about six hours in rising and six hours in falling.

13. In most places the level of the water does not change more than a few feet, but in some places where there is a V-shaped arm of the sea into which the water rushes, the tide may rise as high as sixty feet, or even more.

14. Besides the waves and the tides there are other movements of the waters of the sea. Vast rivers or currents are constantly flowing from one part of the ocean to another.

15. The largest of these currents is in the torrid zone. It is more than a thousand miles wide, and, in the wider parts of the ocean, flows always to the west. When this great stream strikes against the continents, its current is split in two, and part of the water flows southward, while part is turned towards the north.

16. In this way the warm water from the torrid zone is pushed far into the icy regions around the north and the south pole, carrying warmth to places which otherwise would be so cold that no one could live there.

17. Besides the warm currents, there are currents of cold water which flow from the polar regions

to mingle their waters with those of the torrid zone. Thus the ocean currents carry warmth to the ice-bound, polar regions, and at the same time temper the fierce heat of the tropics.

18. In some places the shore of the ocean is low and sandy. Often there is a line of cliffs just back of the long strip of sand, but sometimes there are high rocky banks against which the waves constantly beat.

19. Here and there the shore is almost a straight line for hundreds of miles, but usually it winds in and out in deep curves.

20. Sometimes the water sweeps away into the land through a narrow channel, and then opens out into a broad sea. In other places it almost severs a body of land from the mainland.

21. The sharp points jutting into the sea are called **capess**. The land almost surrounded by water is a **peninsula**, and the long, narrow neck of land which attaches it to the mainland is an **isthmus**.

22. The arms of the ocean are also variously named. A part of the ocean nearly shut in by land is called a **sea**. A body of water extending into the land is a **gulf** or **bay**.

23. The narrow body of water which joins two larger ones is a **strait**. A wide strait is sometimes called a **channel**. A shallow body of water near the land or partly enclosed by it is sometimes called a **sound**.

REVIEW LESSON.

What is the ocean?

The ocean or sea is the body of water which covers most of the earth's surface.

What is said of the size of the ocean?

It is almost three times as large as the land, and covers nearly all the Southern Hemisphere.

How is the bottom of the ocean diversified?

The bottom of the ocean consists of plains and plateaus.

What is found in the bottom of the ocean?

In deep water, the bottom of the ocean is strewn with the shells and skeletons of very small animals.

What is said of the waters of the ocean?

The waters of the ocean are everywhere salt and bitter.

What is the depth of the ocean?

At some distance from the land the ocean is about three miles deep.

Name the divisions of the ocean.

The divisions of the ocean are also called oceans. They are the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Arctic Ocean, and the Antarctic Ocean.

How are ocean waters kept in motion?

Ocean waters are kept in motion by waves, tides, and currents.

By what are waves caused?

Waves are caused by the wind.

What is the height of waves in fair weather?—during a storm?

In pleasant weather, waves are only two or three feet high. In violent storms they are sometimes more than fifty feet high.

What are tides?

Tides are waves that rise and fall twice every day.

What is the height of the tide-wave?

In mid-ocean the height of the tide is about three feet, but in many V-shaped bays which face the inflowing tide, the water sometimes rises to a height of sixty feet.

What are ocean currents?

Ocean currents are streams of water in the ocean itself. Some are warm, others are cold.

From which direction do cold currents come?—warm currents?

The cold ocean currents come from the polar regions. The warm currents come from the warm tropical regions.

Where is the largest ocean current?—name it.

The largest ocean current is in the torrid zone. It is called the Equatorial Current.

Describe the course of the Equatorial Current.

It flows westward, and splits against the eastern shores of the continents, part of the waters flowing north and part south.

What are brought down by the polar currents?

The polar currents bring down huge icebergs which are broken off from the ends of glaciers.

Of what benefit are ocean currents?

Ocean currents carry warmth to the cold polar regions, and cool water to the hot tropical regions.

What is a cape?

A cape is a point of land extending into the sea.

What is a peninsula?

A peninsula is a body of land almost surrounded by water.

What is an isthmus?

An isthmus is a narrow neck of land joining two larger bodies.

What is said of the shores of the ocean?

The shores of the ocean are usually winding and crooked.

What are the arms of the ocean called?

The arms of the ocean are called seas, gulfs, bays, straits, channels, and sounds.

What is a sea?

A sea is a small part of the ocean nearly shut in by land.

What is a gulf or bay?

A gulf or bay is a body of water which reaches into the land.

What is a strait?

A strait is a narrow body of water that joins two larger bodies. A strait is also called a channel.

What is a sound?

A sound is a body of shallow water near the mainland.



Chain of the Great Lakes.

SPRINGS, LAKES, AND RIVERS.

1. Almost every part of the earth is watered by the rain or the snow which falls from the clouds. In some places a great deal of rain falls; in others, a very little; but if all the water that falls on the land in one year were spread evenly over the surface, it would be covered to a depth of almost four feet.

2. Some of the water that falls sinks into the porous ground; some collects in hollow places; and some gathers in channels and flows off upon the surface. Still another part is taken up by the air and changed to vapor which we cannot see.

3. The water which soaks into the ground sinks until it reaches a layer of rock or clay, or is perhaps held among the grains of sand and rock in the same way as it is held by a sponge. There are also a great many hollow places in the ground, and cracks or seams in the rock, and these are filled with water.

4. Some kinds of rock, like chalk and sandstone, are so coarse-grained that water will trickle through them. Other kinds are so hard and close-grained that water cannot pass through them at all.

5. It is the same way with earth. A bed of sand will let water pass through it because the grains of sand have so much space between them.

6. But water will not sink through clay at all; and if there is a layer of clay not far from the top of the ground, the water will sink till it rests on this bed of clay, and it will go down no farther.

7. If a hole be dug into the ground in such a place the water will begin to trickle out at the sides and form a pool at the bottom. No matter how often it be pumped out, it will still ooze out from the sides. It is in this way that our wells are kept full of water.

8. Sometimes the bed of clay or rock slopes so that the water cannot rest upon it. Then the water trickles along the slope in little underground channels until it comes out of the ground at some lower place. The stream of water which thus flows out of the ground is called a **spring**.

9. In some places the water sinks so deep into the earth that it is heated by the hot rock that is there. When it again reaches the surface it is still hot, and the spring is then called a **hot spring**.

10. Perhaps, too, it may have dissolved some of the salt or the soda or the iron that is in the rock. It then is no longer like the pure, tasteless water that falls from the clouds. Such springs are called **mineral springs**. Some mineral springs are hot; others are cold.

11. Much of the water which falls as rain or as snow gathers into rills, brooks, creeks, and rivers, and flows downward, always seeking lower ground, until it reaches the ocean.

12. The beginnings of most rivers are high up on the mountains, where the snows are deepest. Let loose from melting snow-drifts, a few drops trickle down the mountain-side. On their way they are joined by other drops until they flow in a little rill.

13. Other rills join this, and the brook now becomes a stream. It tumbles down the slopes, and rushes along the gully, wearing it deeper and wider.

14. All along its course it meets other brooks, and soon the stream becomes a mountain-torrent. Finally it reaches the base of the mountain, and, receiving the waters of other streams, it is then so large that it is called a **river**.



A River—Near the Head-waters.

15. When the river reaches the plain across which it flows to the sea, its water is full of mud, sand, and fine gravel scoured from the mountain-side.

16. Some of this is dropped as soon as the river reaches the plain, where the water flows more slowly; for swiftly running water will carry much more mud and sand than a sluggish stream.

17. Thus the river builds its bed and its banks higher than the land around. Then, after a while, it breaks through the banks and makes a channel in some other part of the plain.

18. So it goes on, flowing at times in all parts of the plain, sometimes here, sometimes there, but always building up the plain higher and higher with the rock and earth brought from the mountains.

19. When the river reaches the sea the flow is stopped, and twice a day the tide pushes the water back. So at last all the rest of the mud and earth is dropped at the mouth of the river, forming a bar.

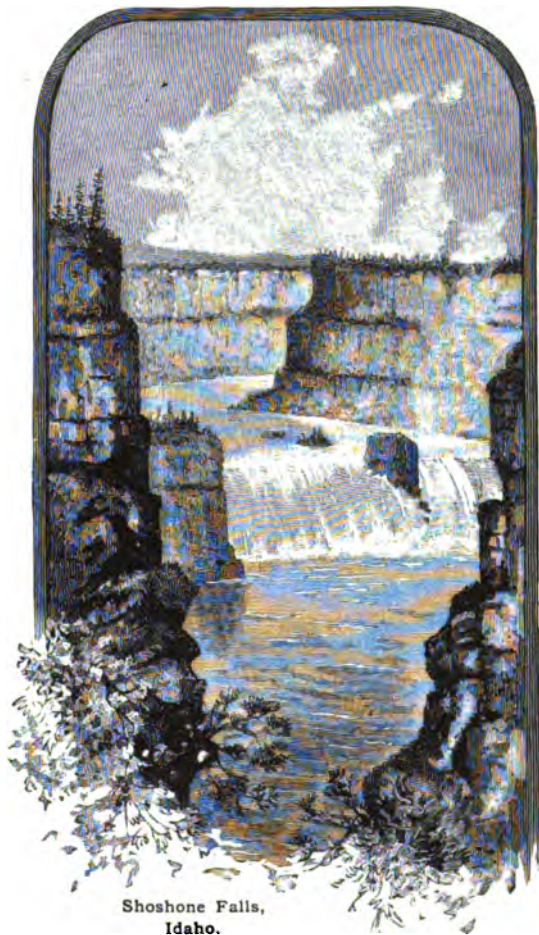
20. Many rivers, just before they reach the sea, are so clogged with the mud they have brought down that they split and flow to the ocean in several channels. The land which these channels shut in is called the delta of the river.

21. Turn to the map on page 60 and look at the mouths or delta of the Mississippi River. Notice, too, that the land reaches far out into the Gulf of Mexico.

22. All this land has been built there by the river itself, and every year the water brings down enough mud to cover a square mile of land more than two hundred and fifty feet deep.

23. It often happens that the water of a river on its way to the ocean flows into a basin or hollow place in the land, where it spreads out over the surface. Such a body of water is called a **lake**, or, if it be small in size, a **pond**.

24. In most lakes and ponds the water fills the basin and overflows at the lowest part of the rim, thus making the lake only a widening of the river. Sometimes a river is a long chain of lakes.



Shoshone Falls,
Idaho.

25. Look at the map on page 80. In this region there are more lakes than in any other part of the world.

26. Notice that these lakes are in long chains, and that all the lakes in a chain are joined by a river.

27. One of these chains is made up of five very large lakes and several smaller ones. As the water flows from one lake to another, it must flow in rapids, for each lake is a little higher than the one east of it.

28. Between Lake Erie and Lake Ontario the water falls more than three hundred feet, and here are the great falls of the Niagara River. The waters of these lakes must flow through the St. Lawrence River before they reach the ocean.

29. The basin of these lakes is always so nearly full that if the level of the water were raised five or six feet higher, some of it would pour over the rim and flow into the Mississippi River.

30. There are a few lakes from which no stream of any kind flows. The water dries up so fast that it never rises as high as the rim of the basin. There are two very large lakes of this kind in the Eastern Continent, and one in the Western Continent.

31. Nearly all lakes that have no streams flowing from them are salt, and the reason is not hard to find. The water as it trickles through the ground dissolves more or less salt, which is carried into the lake-basin.

32. If the lake has an outlet, both the water and the salt flow off; but if there is no outlet, the water dries up, and the salt remains.

REVIEW LESSON.

What is a spring?

A spring is a stream of underground water which flows out of the ground.

How are hot springs formed?

Hot springs are formed when the water of the spring comes in contact with heated rock.

How are mineral springs formed?

Mineral springs are formed when the water dissolves salt, iron, or other mineral from the rocks.

What becomes of the water that does not sink into the ground?

Most of the water that does not sink into the ground flows back in channels to the ocean.

What are the various names of streams of water?

The streams of water are called rills, rivulets, brooks, creeks, and rivers.

What is a river?

A river is a large stream of water flowing through the land.

What are the sources of a river?—the mouth?

The sources of a river are the springs or waters where it begins; the mouth is the place where it flows into the ocean or other water.

Where do most rivers begin?

Most rivers begin high in the mountains, where the snow-fall is greatest.

How is a river formed?

The water trickling from the snow-banks gathers in rills and brooks. These unite and form a river.

How does a river behave in its upper part?

In its upper part a river wears deep channels in the flanks of the mountain.

What is said of the middle part?

In its middle part it carries a great amount of mud or silt which it has brought from the mountains.

What is said of the lower part?

In its lower part it drops most of the silt, building its bed and banks higher than the land around it.

What often occurs in time of high water?

In time of high water the river often breaks through its banks and flows in a new channel.

What is the delta of a river?

The delta of a river is the land made of the silt which the river drops at its mouth.

What is a lake?—What are small lakes called?

A lake is a body of water shut in by land. It is a hollow in the land in which water has collected. Small lakes are called ponds.

What are the inlets of a lake?—the outlets?

The inlets of a lake are the streams flowing into it; the outlets are the streams flowing from it.

What is said of lakes without outlets?

The waters of lakes without outlets are salt.

In which hemisphere are most of the lakes?

Most of the lakes are in the Northern Hemisphere; only a very few in the Southern.

In which continent are lakes most numerous?

Lakes are more numerous in the Western Continent than in any other part of the world.

Where are the largest lakes?

The largest lakes in the world are also in the Western Continent.

THE AIR.

1. The air or atmosphere surrounds the solid part of the earth and rests upon its surface.

2. Many years ago people thought that the air filled all space, and that the earth, sun, moon, and stars all floated in a vast ocean of air.

3. Now we know that it is a part of the earth and extends only a few miles above our heads. In fact, if we imagine the earth to be only as large as an orange, the layer of air would not be quite so thick as the skin of the orange.

4. Although we cannot see the air, yet it is a real substance, and it can be measured and weighed just like anything else. It is so very light that we cannot even feel it except when it is in motion.

5. Air is made up of a mixture of several gases. It always holds more or less of the vapor of water, but the amount of this is all the time changing.

6. Besides these, there is always a great deal of fine dust, smoke, and other impurities. If we let a ray of sunlight stream into a darkened room, we can see millions of little motes floating in the air.

7. If air be heated, its bulk will increase, and it will therefore take up more space. So, also, if warm air be cooled, it will shrink in bulk and occupy less room.

8. Warm air is therefore lighter than cold air. Were it not for this law, there would be no wind; for wind is only air in motion.

9. Wind is caused by the heat of the sun. If all parts of the earth were equally warmed by the sun at the same time, there would be little or no wind.

10. Some parts of the earth, however, get more heat than others. Whenever the sun's rays beat down upon a place, the air becomes warm and rises. As soon as the warm air begins to rise, cooler air flows in to take its place.

11. On land the wind seldom blows steadily in the same direction for any great length of time, but many of the ocean-winds do not change their direction all the year.

12. In many parts of the ocean the wind blows

in one direction for six months. Then it changes, and blows in an opposite direction the rest of the year.

13. During the past hundred years sailors have studied the winds of the ocean very closely. Now we can tell pretty nearly in what directions the ocean-winds are blowing at any time of the year.

14. Near the equator, where the sun's rays are hottest, the air is being all the time warmed. As it becomes warmer it rises, and cooler air flows in from both north and south to take its place.

15. The winds thus produced are called **trade-winds**. They were so named because they were favorable to trading-vessels going from India to London.

16. The trade-winds have always a westerly direction; but they blow towards the southwest in the Northern Hemisphere, and towards the northwest in the Southern.

17. In the temperate zones the ocean-winds blow usually towards the east. They have a northeasterly course in the Northern Hemisphere, and a southeasterly course in the Southern.

18. These winds are sometimes called **anti-trade-winds**, and sometimes **passage-winds**. They are not so steady as the trade-winds. Sometimes it happens that they blow in an opposite direction.

19. Although men have learned much about the winds of the sea, there is much less known about the winds that blow over the land. Unlike the ocean-winds, those of the land are very irregular.

20. On many southern and western coasts, however, there are winds which blow half the year in one direction, and the rest of the year in the opposite direction.

21. These winds are the **monsoons**. When the monsoon comes from the sea, it brings floods of rain; but when it comes from a vast stretch of land, it is so dry that the leaves and grass soon become dry and parched.

22. Some of the land-winds are widely known because they are so violent and destructive. Such are the **tornadoes**. The tornado is a wind which whirls so rapidly that it tears large trees from the ground or twists them off at the roots.

23. Another violent land-wind is the **simoom**. This wind blows over desert-regions. It is a very hot wind, and blows so hard that the air is black with the dust and sand which it sweeps along.

24. Almost all the storms that sweep over the land and the sea are due to whirling winds which are called **cyclones**. Nearly always there are heavy rains with these storms.

25. Within a few years much has been learned about cyclones. Sometimes they sweep over the

land, and sometimes over the sea. Sometimes they are violent, and sometimes gentle.

26. At sea, storms of this kind are apt to be severe, and many a ship has been lost in a cyclone because her master did not know how to steer his way out of it.

27. Nowadays, trained sailors know how to find the direction in which the storm is moving, and also in which way it whirls.

28. In the temperate zones these storms move in an easterly direction,—northeasterly in the Northern Hemisphere, and southeasterly in the Southern.

29. In the Northern Hemisphere they whirl from right to left, but in the Southern Hemisphere the whirl is in the opposite direction.

REVIEW LESSON.

Where is the air, or atmosphere?

The air, or atmosphere, rests upon the solid part of the earth.

Of what is it composed?

It is composed of gases, and contains a small amount of moisture, or the vapor of water.

How far above the earth's surface does it extend?

It extends more than one hundred miles above the earth's crust.

How does heat affect air?

If air be heated, it will take up more space. Hot air is, therefore, lighter than cold air.

What occurs when cold air next the earth's surface is heated?

When cold air next the earth's surface becomes warmed, it rises, and cooler air flows in to take its place.

What is wind?

Wind is air in motion.

Name the principal winds.

The principal winds are the trade-winds, the passage-winds, and the monsoons.

In what part of the earth are the trade-winds?

The trade-winds are in the torrid zone.

What is their direction?

They blow from the southeast in the Southern Hemisphere, and from the northeast in the Northern Hemisphere.

In what part of the earth do passage- or anti-trade-winds blow?

The passage-winds are the principal winds of

the temperate zones. They blow from the southwest in the Northern Hemisphere, and from the northwest in the Southern Hemisphere.

What is said about the winds that blow on the land?

On land, a few miles from the coast, the winds are irregular, and may blow in any direction.

What are monsoons?

Monsoons are winds that blow about six months in one direction, and the rest of the year in an opposite direction.

What are tornadoes?

Tornadoes are winds which have a rapid whirling motion.

What is the simoom?

The simoom is a very hot and dry wind that blows in desert regions.

What is the nature of nearly all the storms that sweep over the land and the sea?

Most of these storms are due to whirling winds which are called cyclones.

In what direction does the cyclone move?

In the Northern Hemisphere the cyclone travels in a northeasterly path; in the Southern Hemisphere, in a southeasterly direction.

In what direction does it whirl?

The whirl of the cyclone is from right to left in the Northern Hemisphere, and from left to right in the Southern.

DEW, CLOUDS, AND RAIN.

1. All the water on the land comes from the ocean, whether we find it as ice and snow high up in the mountains, as dew on the grass and leaves, or as a cloud that hovers over the land.

2. Wells, springs, rivers, and lakes have all been filled with water brought from the ocean. Let us try to understand how this takes place.

3. We have already learned that the vapor of water is always present in the air. This may be shown in a number of ways. Carry a pitcher of ice-cold water into a warm room, and notice what happens. A film of mist at once gathers on the outside of the pitcher, and in a little while the fine mist forms into drops of water.

4. Now, the water which thus gathers does not come out of the pitcher, for the same thing would have taken place if a piece of cold iron had been used instead of a pitcher of iced water.

5. The moisture comes from the air itself. In the warm air of the room the water is not in a liquid state, but in the form of an invisible vapor. When the air near the pitcher becomes chilled, it cannot hold so much vapor, and so the latter is changed to water.

6. The same thing happens when one breathes against a cold mirror or against a window-pane. The hot, moist breath is chilled, and the moisture turns to water. This is called **condensation**.

7. It may seem strange that air should hold moisture in this way, and one may ask how it gets there. Pour a little water into a shallow dish and set it in the open air. In a few hours the water disappears, and we say that it has dried up.

8. The water, however, has not "dried up;" it has changed to an invisible vapor, which is floating about in the air.



A RAIN-STORM
SUNSHINE ABOVE THE CLOUDS

9. This change is called **evaporation**, and the water which is taken up by the air is said to have *evaporated*.

10. Everywhere on the surface of the earth evaporation is taking place on a large scale. We can notice it best after a rain-storm. When the sun shines out and warms the air, the water in the road and on the grass evaporates. Ponds, lakes, rivers, and even the great ocean itself, give up water to the air in this way constantly. Let us inquire what becomes of it.

11. We have learned that there is far more moisture in the air when it is hot than when it is cold. On a hot day there may be five or six times as much as on a winter day. If, however, warm air be suddenly cooled, some of the vapor which is mingled with it will quickly change to water.

12. When the vapor is first condensed we see it as a fine mist, which is made up of very small particles of water. After the sun has gone down, the mist gathers on the leaves and the grass. It is then called **dew**.

13. Now, the moisture does not come out of the grass and the leaves; it comes from the air. At night, if the sky is clear, the surface of the earth becomes cold, and chills the lower air so much that it cannot hold all the moisture it contained in the daytime.

14. Some of the moisture, therefore, gathers on the leaves, the grass, and the ground. When morning comes, the air is warmed and takes up the dew it deposited the night before.

15. A great deal of moisture is also condensed

by means of the winds. When a warm wind blows against a high mountain-range the air is quickly cooled, and a cloud forms on the mountain-crest; or if wind full of vapor comes from the ocean, it is condensed so quickly that a torrent of rain falls.

16. Indeed, it is in this way that most of our rain-storms come. A warm, moist wind becomes cooled, and immediately the air is filled with mist. This is the rain-cloud. The little particles of mist gather into rain-drops and fall upon the earth.

17. The wind in the mean time comes in from the ocean, and, as fast as it is cooled, more mist forms, and more rain falls. So it keeps on until the wind blows in some other direction.

18. Sometimes the moist air is cooled only a very little, and high banks of mist seem to be piled up in the sky. These banks of mist are **clouds**, and almost any clear day we may see them form.

19. At first there is a little white flake which seems to grow from nothing. Then another and

another appear. All the time the cloudlets are growing larger and larger, until at last perhaps half the sky is overcast.

20. When we see the clouds thus gathering in the sky we know that the warm air is being cooled and is giving up some of its moisture. Or when the clouds seem to melt away, we know that the air is growing warmer and is taking up moisture.

21. By thus watching the clouds we may often foretell the state of the weather. Sometimes we see that the moisture is gathering and threatening rain. At other times it is disappearing in the air, promising us sunshine and fair weather.¹



Forms of Clouds.

22. In the picture on the preceding page some of the more common kinds of clouds are shown. In the upper part are light, fleecy feather-clouds. These are the clouds which sailors dread to see, because they nearly always foretell a storm.

23. In the centre are the summer-clouds, which we so often see piled up like great banks of mist. On the right is a mass of rain-clouds. The latter, as we may notice in the picture on page 23, rest almost on the ground, while above them the sun is shining clear and bright.

24. We have already learned that the warm winds blowing over the ocean take up an enormous amount of vapor. This is carried along till the wind reaches the land. Here the wind is chilled, and the moisture is dropped.

25. In most places the rain comes in showers which last a few hours, or perhaps a few days. Near the equator, however, there is a broad belt in which rain falls nearly every day in the year. On many western and southern coasts there is a rainy and a dry season, each about six months long.

REVIEW LESSON.

What is said about the vapor of water?

Air always holds some of the vapor of water. Hot air will hold more than cold air.

When does water evaporate?

When water is taken up by the air it is said to *evaporate*.

How may it be shown that water evaporates?

After a rain-storm, when the sun shines out, the water in the roads and on the grass "dries up."

When is it condensed?

When it is given up by the air it is said to be *condensed*.

How may it be shown that air contains moisture?

When a cold body is brought into a warm room, fine drops of water gather on the surface.

From where does the water of the land and the air come?

The water on the land and the moisture in the air all come from the ocean.

How is the water carried from the ocean?

The water is taken from the ocean by the air in the form of an invisible vapor.

What takes place when warm winds blow over the ocean?

When warm winds blow over the ocean they take up or evaporate a large amount of water.

What occurs when the moist winds strike the land?

When the moist winds strike the land the air is cooled, and the moisture is condensed.

In what forms does the moisture appear?

It appears in the forms of dew, mist, clouds, rain, and snow.

What is dew?

Dew is the moisture which forms at evening, when the air next the earth cools rapidly.

Why does it disappear in the morning?

It disappears in the morning because the air grows warmer and can hold more moisture.

When do mist, fogs, and clouds appear?

Mist, fogs, and clouds appear when the vapor in the air is first condensed.

When is rain formed?

Rain is formed when the moisture gathers into drops and falls on the earth.

In what zone does most of the rain fall?

More rain falls in the torrid zone than in any other part of the earth.

In what parts of the continents are there rainy and dry seasons?

On the southern and western coasts of the continents there is a rainy season of several months, and a dry season the rest of the year.

¹ TO THE TEACHER: It is an excellent plan to familiarize the pupils with the various forms of clouds, and in all localities east of the Pacific slope there are but few days in which several kinds may not be seen at once. The fleecy cirrus-clouds are always at a height of several miles above the surface of the earth. They usually, especially when in rapid motion, foretell a change of weather. Stratus-clouds are most commonly seen near the horizon morning and even-

ing, appearing as level sheets of vapor, one above another. Cumulus or summer-clouds are most common in warm weather. They appear in rounded masses, which increase in size towards the hottest part of the day. It should also be impressed on pupils' minds that rain-storms rarely extend more than a mile above the earth's surface. On high mountain-slopes one may occasionally see dense rain-clouds below him, while above the sun is shining.



Snow-Flakes.

SNOW, GLACIERS, AND ICEBERGS.

1. When it is very cold, the moisture of the air does not gather in drops, but falls in the beautiful flakes we call **snow**. If we look at some of these snow-flakes we shall find that each is a six-sided crystal with feather-like rays.

2. When it is very cold, and snowing lightly, if you catch some of these flakes on a piece of black woollen cloth and look at them closely out-of-doors you will see about such shapes as are shown in the picture.

3. In the polar regions the ground is covered with ice and snow nearly all the year. In warm countries snow is never seen except high up in the mountains. In the temperate zones there is usually snow in the winter, but even here one can find many places where snow never falls.

4. On high mountains nearly all the moisture falls as snow, and in some of the mountains of the Western Continent the snow-banks in mid-winter are sixty feet deep.

5. We may wonder, then, why the snow does not pile up until it becomes an immense mass many times larger than the mountain itself. But there are several ways in which the snow is cleared off the mountain-sides.

6. Some of it melts, and trickles down the pebble-worn gullies in rills and brooks. Some evaporates, just as wet clothes hung out-of-doors dry, though they may be frozen stiff.

7. Much of it is blown away by the fierce gales of wind which whistle among the mountain-crags

and quickly drift the snows into the ravines and valleys.

8. Sometimes during a long snow-storm a vast amount of snow will fall on the steep side of the mountain. After a while the weight of the snow is so great that it can no longer cling to the slope. There is a noise like the cracking of ice, and then the immense mass crashes down the mountain.

9. This mass of sliding snow is called an **avalanche**. At times, nine or ten of these avalanches will dash down the mountain in a single day. Nearly always they plow paths deep into the earth, tearing up large trees, and even burying villages that may be in the way.

10. There is still another way in which the snow is removed from the mountain-slopes. Much of it, as we have just learned, is drifted by the wind into ravines and gulches.

11. In the upper part of the ravine we find light, fleecy snow. A little farther down, instead of snow-flakes we shall find small rounded grains of ice. Still farther down, we notice that the grains are frozen together, and that the ice is scored with deep cracks and covered with hummocks.

12. If we look carefully we shall find that the ice is moving. It moves perhaps not more than a few inches in a day, but otherwise it flows much like a river. It is, in fact, a river of ice, and it is called a **glacier**. It carries away the surplus snow just as rivers carry off the surplus water.

13. The glacier almost always creeps far into the valley a long way below the limit of snow and ice. All the time streams of muddy water are flowing from the cracks and seams. By and by it reaches so far into the valley that the ice melts as fast as it is brought down.¹

14. Here the glacier ends, and the streams of water that have trickled through the broken ice join and form a river. If we could travel along the mountain-side we should find that many of the torrents that make our large rivers come from glaciers.

15. All along the glacier, rocks fall down the banks and lodge on the moving ice. Some of them sink into the wide cracks and go to the bottom. Most of them are pushed against the sides of the glacier and form long walls of rock.

16. Many ages ago the glaciers which covered North America and Europe carried boulders for hundreds of miles, and left them scattered over the plains. Look at the map of Europe on p. 92. The ragged and frayed coast in the northwestern part was worn into that shape by glaciers.

17. Along the icy shores of the arctic regions there are many large glaciers whose lower ends reach the sea. As the ice is pushed farther and farther into the sea, huge masses break off and float away. These great masses are called **icebergs**.

18. Some of these icebergs are carried thousands of miles by ocean-currents and winds. They drift about with the winds and waves into warm latitudes, until at last they melt, or else are broken into pieces by storms.

REVIEW LESSON.

When is snow formed?

Snow is formed when the moisture in the air is frozen as fast as it is condensed.

What is the shape of snow-flakes?

Snow-flakes are six-sided crystals with beautifully-feathered edges.

Where does most of the snow fall?

Most of the snow falls high up on the slopes of lofty mountain-ranges.

What is said of the snow falling in polar regions?

In the polar regions but little of the snow ever melts.

Where does snow fall in the torrid zone?

No snow falls in the torrid zone except on very high mountains.

How is the snow removed from the mountain-slopes?

A small portion of the snow evaporates; some of it melts; part of it rolls down the steep slopes as avalanches; and part is carried off by glaciers.

What is an avalanche?

An avalanche is a mass of snow which slides down a mountain-slope.

What is a glacier?

A glacier is a stream of ice which moves slowly down a mountain-ravine.

What is said of the motions of the glacier?

The glacier flows slowly—sometimes not more than a few inches in a day. Otherwise it flows much like a river.

Of what does the upper part of the glacier consist?—the middle part?—the lower part?

The upper part of the glacier consists of fine snow; the middle part, of very small grains of ice; and the lower part, of solid masses of ice.

To what are the scored and ragged shores of the northern coasts often due?

The ragged sea-coasts of many of the northern countries are due to glaciers of a former age.

What is said of the lower end of the glacier?

The lower end of the glacier is often the source of a river.

What are icebergs, and how are they formed?

Icebergs are huge pieces of ice that break from the ends of glaciers which flow into the sea.

¹ TO THE TEACHER: Not all glaciers flow in narrow channels. (See pp. 19 and 72 of the *Complete Geography*.) In some instances the glacier is a vast sheet of ice many miles in width moving little by little down the slope of the mountain. The glaciers on the slopes of Greenland are of the latter class; those of Alaska and Switzer-

land are of the former. One can frequently observe the phenomena of glaciers during the thawing of the snow, at the approach of spring. The melting snow which lodges on steep slopes almost always shows glacial motion. It may be observed even on the roofs of houses when a thaw follows a heavy snow.

M A N.

1. No one has ever been able to tell just how many years ago the first plants and the first animals appeared on the earth. We do know, however, that long ages ago, much of that part of the earth's surface that is now dry land was a vast swamp.

2. This great swamp was covered with giant ferns, horse-tails, and cone-bearing trees, while enormous reptiles lived in its slimy streams.

3. By and by the face of the earth changed, and hills and plains began to take the place of the vast marsh. Then the huge reptiles and the great tree-ferns disappeared, and other animals and plants took their places.

4. All during these ages Europe, Asia, and North America were regions of perpetual summer, swept by warm winds and moistened by bounteous rains.

5. Then there came a great change. The warm, moist breezes that had fanned these lands for so many ages gave place to winds of icy coldness. Fields of ice crept farther and farther from the north, until they covered much of the land.

6. The sharp tops of the mountains were worn away, and deep cañons were plowed into the hard rock. Far and wide the plains were covered with boulders which the ice had brought down.

7. During this long, cold age many kinds of animals perished, and only their bones remain to tell us about them. The cave-lion, the cave-bear, and the reindeer, however, survived.

8. The remains of the animals which survived the age of ice are of great interest because they give us some clew to the time when man appeared on the earth. We know that man existed on the earth at this time because we find his bones with the bones of these animals.

9. Almost always these bones have been found in caverns, which have been covered with limestone and gravel. Almost always, too, rude flint weapons and the partly charred bones of the reindeer are found with the bones of man.

10. From these few scraps we may infer that in an early part of his history man lived in a savage

state. He obtained his food chiefly by hunting and fishing, and lived generally in caves.

11. He had learned to use tools and to make his own weapons. More than all else, he had learned the use of fire, and this gave him greater power than all his weapons and tools, for without fire he could never rise from his savage state.

12. But all through the long, dreary ages man steadily grew wiser. Instead of living like a wild beast, in caves, he learned to build dwelling-places. The houses were mere huts, it is true, but they were better than caves.

13. From a timid savage, living in caves, to a brave shepherd watching over his flocks or tilling the soil, was a great step. His weapons of the chase were changed to working tools. At first these were made of stone, then of bronze, and finally of copper or other metal.

14. In time, as man learned to use better the senses that God had given him, he came to love right, justice, and peace. He associated with other men in clans and tribes, which were always ruled by the strongest and bravest.

15. From clans and tribes there grew nations. Usually they were composed of people speaking the same language and having the same customs, but in time a nation sometimes included tribes speaking various languages and having no kindred tie.

16. As man became better educated and more enlightened, there finally came a time when people were wise enough to make their own laws, and to choose a ruler—not to be a tyrant, but a servant, to carry out their wishes.

17. The first written history of mankind begins with a people who lived somewhere in the southern part of Asia. We know little of their earliest history, but we have learned much about their habits and their customs from their language.

18. This people we now call the Ar'yans. They tilled the soil, lived in houses, and used tools made of metal. They also knew how to build ships and to hew stone.

19. They tamed the more useful animals, and had herds of cattle and sheep. They also trained horses to bear burdens, and the dog to be a companion.

20. The Aryan women had learned to weave, spin, and sew, and, more than all, they taught their children to do right and to obey a divine Being.

21. In course of time, as the Aryans grew in number, the more courageous pushed westward to make new homes. Their descendants settled nearly all of Europe, and at a later period, going still farther westward, settled America.

22. All the most powerful nations in the world to-day are of the Aryan race. They include many of the people of Southern Asia and nearly all the people of Europe and America.

23. There was also another people, called the Semitic race, living in Asia, who became rich and powerful. Unlike the Aryans, they never removed far from the place where they were first known.

24. They had great kingdoms in the western part of Asia and the northern part of Africa. The He-

brews belonged to this race, and their descendants, the Jews, are the chief Semitic people living to-day.

25. There were also a great many tribes and clans in the eastern and northern parts of Asia. They were skillful horsemen and kept vast herds of cattle.

26. Some of these people built great cities in the southeastern part of Asia. Some of them wandered to the islands southeast of Asia, and some, it is thought, crossed over to America.

27. This people is sometimes called the Turanic race. Like the Aryans, the Turanic people were great travelers, but, unlike them, they wandered eastward instead of westward.

28. There is still another people of whose early history we know very little. They live in Africa and parts of the Australian Continent. They belong to the Hamitic or Negro race, and are noted for having black skins and woolly hair.

29. Many people of the Negro race have been brought to the American Continent, where they have become civilized and enlightened.

REVIEW LESSON.

What is said about the time when animals and plants first appeared on the earth?

It is not known at just what time animals and plants appeared on the earth.

What is said of the early condition of man?

In the early part of his history, man lived in a savage state, getting his food chiefly by hunting.

How did man improve his condition?

He learned the use of tools and of fire. He learned also to live in houses instead of in caves.

How else did man improve his mode of living?

He associated with others in clans and tribes, and finally organized governments.

Where may we learn much about the early history of man?

We may learn much about the early history of man from the Holy Scripture.

Into what races is mankind usually classified?

Mankind is usually classified into the Aryan, Semitic, Turanic, and Negro, or Hamitic races.

What is known of the Aryan people?

The Aryan people first lived in the southern part

TO THE TEACHER: The Aryan or Indo-European race corresponds nearly to the Caucasian; the Turanic, to the Mongolian,

of Asia. Their descendants settled nearly all of Europe and America.

What is said of the character of the Aryan race?

The Aryans have always been the most progressive and the bravest of all people.

Where are the Semitic people found?

The Semitic people live chiefly in Southwestern Asia and Northern Africa.

Who are the best-known people of this race?

The Jews are the best-known people of the Semitic race.

In what part of the earth is the Turanic race found?

The Turanic or Mongolian people live chiefly in Eastern Asia and the islands of the Pacific Ocean.

To what part of the world is the Negro race native?

The Negro race is native to Africa and parts of the Australian Continent.

Where are many of the descendants of this race now found?

Many of the descendants of the Negro race now live in the American Continent.

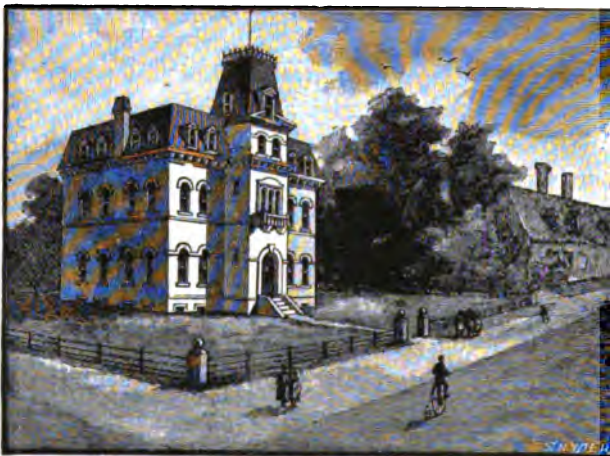
Malay, and American races; and the Hamitic, to the Negro or black race.

GLOBES AND MAPS.

1. Because the world is so large, we can see only a small part of it at a time. If we wish to study about the whole world at once, or even about a large part of it, we can better do so from a small globe on which the outlines of the land and the water are drawn and colored.

2. Let us look at one of the small globes which we can find in almost every school-room. Perhaps the first thing we notice is that the globe has a great many lines drawn on its surface.

3. These lines are drawn on the globe so that we



Picture of School-house.

may be able to tell where places are. The lines are all numbered, and there are two sets of them.

4. Let us see how these lines are drawn and numbered. First a circle is drawn around the globe, midway between the poles. This circle is called the **equator**. Then other circles are drawn parallel to the equator. These lines are called **parallels**.

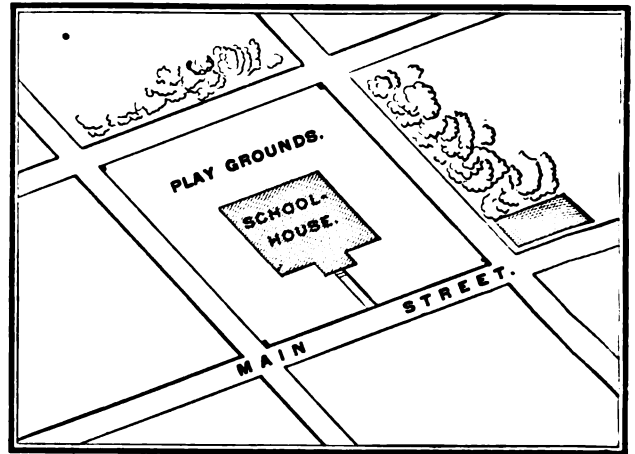
5. But the parallels tell only how far north or south of the equator a place is. To measure distances east or west we must use the lines that cross the parallels. These lines are called **meridians**. Notice that every one passes through the poles of the globe.

6. The position of a place on the earth is called its **latitude** and **longitude**, and when we wish to tell where the place is, we give the numbers of the parallel and meridian that pass through it. Let us learn first how these lines are numbered.

7. The distance around the globe is said to be 360 degrees (marked $^{\circ}$), and the parallels on most globes are drawn ten degrees apart.

8. Latitude is always measured from the equator, and any place on the equator is in latitude 0° . A place north of the equator is in north latitude; a place south of the equator is in south latitude.

9. Longitude is almost always reckoned from the meridian which passes through Greenwich, a small town near London, where there is an observatory in which the calculations about longitude are made.



Map of School-house.

10. Places east of Greenwich are in east longitude; those west of it are in west longitude. Any place on the Greenwich meridian is said to be in longitude 0° . The meridian of Greenwich is called the **prime** or **standard meridian**.

11. We cannot always use a globe as a model of the earth. Even if we could have a large globe always at hand to help us in studying geography, it would be very difficult to learn about small places. We must therefore make a drawing on paper.

12. Such a drawing is called a **map**. But if we try to fit a piece of paper on a globe we shall soon find that it cannot be done. No matter how carefully we try, there will be wrinkles and creases in the paper.

13. It is impossible to draw correctly on a flat surface what properly belongs on a curved surface. A map never has an accurate shape at best, and

a map of a very large surface is not so correct as one of a small area.

14. If we look at the maps of the same country in different books, we can see at a glance that they are not quite alike in shape.

15. We notice, too, that the parallels and meridians have odd-shaped curves, and that the parallels are not everywhere the same distance apart. On the maps of the Hemispheres, pages 32 and 34, the parallels are much wider apart at the edges than in the centre of the map. And yet on the globe the parallels are everywhere the same distance apart. Let us find a reason for this.

16. Imagine that we cut our globe in halves, taking care to cut through the poles. We shall then have two **hemispheres**. Suppose, now, we place one of them against the wall and press it flat.

17. We shall then find that the parallels and meridians will take about the shape we see in the diagram. The hemisphere will have spread out at the edges, and the parallels will be wider apart at the edges than in the centre.

18. Our flattened globe will have much the shape that the map of a hemisphere has. In a map of a hemisphere the difference can be easily noticed, but in a map of a small area it could not be detected except by very close measuring.

19. The points of the compass on the map are as easy to learn as on the globe. North and south are always measured along the meridians. North is towards the top of the map; south is towards the bottom. East is towards the right margin of the map; west is towards the left margin.

20. The parallels and meridians on the maps are not always numbered as they are on the globes, but each has always its proper number. We may, however, draw as many parallels and meridians as we please, if only we draw them in the right place and number them correctly.

21. There are four other parallels usually found on maps of the hemispheres. They are the **arctic circle**, the **antarctic circle**, the **tropic of Cancer**, and the **tropic of Capricorn**. These parallels mark the boundaries of the zones. (See p. 8.)

REVIEW LESSON.

What are the lines drawn on the globe called?

The lines drawn on the surface of the globe are called parallels and meridians.

For what purpose are they used?

They are used in telling the positions of places on the earth's surface.

What is the equator?

The equator is a circle around the earth drawn midway between the poles.

How are the other parallels drawn?

The other parallels are drawn at equal distances apart, parallel to the equator.

How are meridians drawn?

Meridians are drawn around the globe, passing through its poles.

What is the position of a place on the earth called?

The position of a place on the earth or on the globe is called its latitude and longitude.

What is latitude?

Latitude is the distance in degrees north or south of the equator.

What is longitude?

Longitude is the distance in degrees east or west of the meridian passing through Greenwich.

What is a map?

A map is a drawing of the whole or a part of the earth's surface.

How are parallels and meridians drawn on maps?

Parallels are drawn right and left across the map; meridians, up and down across the map. Their numbers are given in the margins.

How is direction measured on maps?

Direction on maps is measured along the parallels and meridians.

In which direction on the map is north?—south?—east?—west?

North is towards the top of the map; south is towards the bottom. East is towards the right, and west is towards the left margin of the map.

What other parallels are drawn on maps of the world?

The arctic circle, the tropic of Cancer, the tropic of Capricorn, and the antarctic circle are drawn on maps of the world to mark the boundaries of the zones.



THE WESTERN HEMISPHERE.

QUESTIONS ON THE MAP.

What grand divisions are wholly within the Western Hemisphere? What grand division is partly in this Hemisphere? What grand division does the equator cross? In what latitude is North America? *Ans.—In north latitude, because it lies north of the equator.* In what latitudes is South America? What grand division does the Tropic of Cancer cross?—the Tropic of Capricorn? What three bodies of land does the Arctic Circle cross? Which is farther west, Bering Strait or the Sandwich Islands?

What zone between the Tropic of Cancer and the Arctic Circle?—the Tropics of Cancer and Capricorn?—the Tropic of Capricorn and the Antarctic Circle?—the Antarctic Circle and the South Pole?

Near what parallel of latitude is New York?—Mexico?—Quito? Between what meridians is the greater part of South America? Near what meridian is Mexico?—Buenos Ayres?—Washington? What part of the Western Hemisphere is in east longitude? *Ans.—All that part west of the 180th meridian.*

Forms of Land.—What chain of islands southeast of North America?—extending from the northwestern part of North America? What group of islands southwest of North America? What is the

largest island of this grand division? *Ans.—Greenland.* What name is given to the islands north of North America? *Ans.—The Arctic Archipelago.* What two peninsulas project from the southern part of North America? What cape projects from the northwestern part?—from the north?—the extreme east?—the southwestern part? Name the eastern cape of South America—the southern—the western.

What mountains extend from northwest to southeast through North America?—from north to south through South America?

Forms of Water.—What strait separates Asia from America? What sea and what ocean does it join? What bay in the northern part of North America?—gulf in the southern part? What bay and strait between the mainland and Greenland?

What ocean in the northern part of this hemisphere?—southern part?—eastern part?—western part?

On which side of the Rocky Mountains are the longest rivers? Name three large rivers of North America—of South America. In what direction does the largest river of North America flow?—of South America? Name a tributary of the Mississippi—of the Amazon.

1. If we wish an exact map of the earth's surface, we must draw it on a globe or a sphere. But we could not put a globe into a book: so it is better to divide the sphere into halves, or hemispheres, and draw a map of each on a flat surface.

2. On the opposite page is a map of the Western Hemisphere, which shows us just what divisions of land and water it contains.

3. There are two grand divisions of land, North America and South America, and together these are called the American or Western Continent. Sometimes each grand division is spoken of as a continent.

4. Besides these two divisions, the Western Hemisphere contains a part of Asia and many groups of islands.

5. There are four grand divisions of water partly in this hemisphere, the Arctic, Atlantic, Antarctic, and Pacific Oceans.

6. Let us now look at the two grand divisions,

North America and South America. We see that both are broad at the north and that they taper to a point at the south; also that each has a high mountain-system on its western coast and a lower one on its eastern coast.

7. These two grand divisions are very large. Each is about 5000 miles from north to south and about 3000 miles from east to west.

8. We see also that South America has a regular coast-line, while that of North America is broken and very irregular.

9. The islands in the Arctic and Atlantic Oceans are mostly high and rocky, and are continental islands. Greenland is a high plateau.

10. The islands of the Pacific Ocean are chiefly of coral formation.

11. Many of them are formed upon the crests of volcanic mountains that have sunk partly or wholly under water. Indeed, there are many of the now-active volcanoes upon such islands.



THE EASTERN HEMISPHERE.

QUESTIONS ON THE MAP.

What grand division is crossed by the equator? What continent lies wholly in the Southern Hemisphere? *Ans.—Australia.* What two grand divisions are crossed by the Arctic Circle?—by the Tropic of Cancer?—by the Tropic of Capricorn? Which of these grand divisions lies in three zones? Which is the largest? Which extends farthest north?—farthest south?—east?—west? What do Europe, Asia, and Africa constitute? *Ans.—The Eastern Continent.*

Near what parallel of latitude is Peking?—Bombay?—St. Petersburg?—Stockholm? Near what meridian of longitude is London?—Tokio?—Stockholm?

Forms of Land.—What chain of islands east of Asia?—southeast of Asia? What islands west of Europe? What large island southeast of Africa?—north of Australia?—south of Australia? What two large islands are crossed by the equator? What land is crossed by the Antarctic Circle?

What two peninsulas extend from the eastern coast of Asia? What two from the southern coast of Asia? *Ans.—Farther India and Hindoostan.* What is the most northern cape of the Eastern Hemisphere?

sphere?—of Europe?—the southern cape of Africa?—eastern cape of Africa?—the southern cape of the Australian Continent? *Ans.—South Cape.*

Forms of Water.—What three seas east of Asia?—sea and bay south? What sea between Africa and Asia?—between Europe and Africa? What two seas in the western part of Europe?—two between Europe and Asia? What large gulf indents the western shore of Africa?

What strait between Europe and Africa?—between New Guinea and Australia?—between Australia and Tasmania?

What ocean in the northern part of this hemisphere?—eastern part?—southern part?—western part? What ocean is partly shut in by Africa, Asia, and Australia?

Name three large rivers of Asia that flow into the Arctic Ocean—three that flow into the Pacific Ocean. What river flows into the Bay of Bengal?—into the Arabian Sea?—into the Caspian Sea?—into the Black Sea?—two into the Gulf of Guinea? What river of Africa flows into the Mediterranean Sea? What inland sea in Asia?

1. The other half of the earth is called the Eastern Hemisphere. By looking at the maps of the two hemispheres we find that the Eastern Hemisphere contains much larger land-masses than the Western Hemisphere.

2. Sometimes the Eastern Hemisphere is called the Old World, because powerful nations lived here a great many years before anything was known about the Western Hemisphere or New World.

3. The Eastern Hemisphere contains the Eastern and Australian continents, together with a great many large islands.

4. The Eastern Continent is made up of Europe, Asia, and Africa. Europe and Asia form a single body of land. Africa is a peninsula joined to Asia by a low, sandy neck of land called the Isthmus of Suez.

5. Like the grand divisions of the Western Continent, those of the Old World taper to a point at the south, and, if we call Europe and Asia a single division, they are broad in the north.

6. In Europe and Asia the highest mountain-systems are in the south, and the spurs of this

system jut into the sea, forming a great many peninsulas.

7. In Africa, however, the high mountains are all near the coast, so that this grand division is a vast plateau. Unlike Europe and Asia, Africa has but few islands near its coast.

8. Australia is the smallest of the continents. Like Africa, its mountains are near the coast. The native plants and animals of Australia are unlike those of any other part of the world.

9. There are five grand divisions of water, four of which are partly in the Western Hemisphere. The Indian Ocean is wholly in the Eastern Hemisphere.

10. Almost all the large islands in the world belong to the Eastern Continent. They form long chains near the coast of Asia. All of them are mountainous, and they contain most of the active volcanoes in the world.

11. The coral islands of the Pacific Ocean belong to the large group which lies in both hemispheres. The island groups southeast of Asia, together with Australia, are sometimes called Oceania.

REVIEW LESSON.

How are maps of the world commonly shown?

They are commonly shown as maps of the Eastern and Western Hemispheres.

WESTERN HEMISPHERE.

What land-masses does the Western Hemisphere contain?

The Western Hemisphere contains the Western Continent, a small portion of Asia, and many groups of islands.

What oceans are included in the Western Hemisphere?

It includes parts of the Atlantic, Pacific, Arctic, and Antarctic Oceans.

Of what grand divisions of land is the Western Continent composed?

The Western Continent is composed of the grand divisions of North America and South America.

In what direction does this continent extend?

It extends from northwest to southeast.

By what are North America and South America joined?

They are joined by the Isthmus of Panama.

How long and how broad is each grand division?

Each grand division is about 5000 miles long and about 3000 miles broad.

Where are the highlands of the grand divisions?

Each grand division has a high mountain-system on the western border, and a lower one on the eastern border.

What is said of the islands of the Western Hemisphere?

The continental islands are generally high and rocky; most of the islands of the Pacific Ocean are coral islands.

What may be said of the chains of islands in this hemisphere?

The chains of islands are mountain-ranges partly under water.

EASTERN HEMISPHERE.

What is the Eastern Hemisphere sometimes called?

The Eastern Hemisphere is sometimes called the Old World.

What land-masses does this hemisphere contain?

It contains the Eastern and Australian Continents and many groups of islands.

In what direction does the Eastern Continent extend?

It extends from northeast to southwest.

Of what grand divisions is the Eastern Continent composed?

The Eastern Continent is composed of the grand divisions of Europe, Asia, and Africa.

How long and how broad is the Eastern Continent?

It is about 10,000 miles long and about 3000 miles broad.

Of what do Europe and Asia consist?

Europe and Asia form a single body of land.

What is said of the shape of the grand divisions of the Eastern Continent?

The land-masses of the Eastern Continent are broad at the north and narrow at the south.

Where are the principal highlands of Europe and Asia, and in what direction do they extend?

The highlands of Europe and Asia are in the southern part; they extend east and west.

What natural division of land is Africa?

Africa is a peninsula joined to Asia by the Isthmus of Suez.

Where are the principal highlands of Africa?

The mountains of Africa are near the coast. Africa has a high border and a low inland region.

Which is the smallest of the continents?

Australia is the smallest of the continents.

What is said of the surface of Australia?

The highlands of Australia are situated on the eastern and western borders; the interior is a low plain.

For what are the plants and animals of Australia noted?

The native plants and animals are unlike those of any other part of the world.

What grand divisions of water are in the Eastern Hemisphere?

The Atlantic, Pacific, Arctic, and Antarctic Oceans are partly, and the Indian Ocean is wholly, in the Eastern Hemisphere.

What is said of the islands of the Eastern Hemisphere?

Most of the large islands in the world are in the Eastern Hemisphere.

How are these islands situated, and for what are they noted?

They form long chains near the coasts of the continents, and contain many volcanoes.

POLITICAL AND INDUSTRIAL GEOGRAPHY.

1. The most instructive lessons we are to learn in geography are about man, his government, his ways of living, and his occupation.

2. When people lived in an uncivilized state, their wants were few and easily supplied. But as they increased in numbers and began to learn the arts of civilization their wants became more numerous.

3. In order better to protect themselves, weaker tribes and clans would join together, and thus in time nations were formed. Sometimes the nation was called a kingdom, sometimes an empire, and sometimes a republic.

4. In every case each nation claimed a certain amount of land as its own, and by and by as the people increased in numbers it became necessary to make boundaries between them.

5. Frequently the boundary is a range of mountains; sometimes it is a river; and sometimes a line of posts set in the ground. In the last case it is called a political boundary; in all others, a natural boundary. These boundaries separate political divisions.

6. The most important result of the increase of population is the division of labor and industries. When there were but few people in a country, there was but little difference in their occupations. They tended their herds of cattle, tilled the soil to obtain their food, and made their houses, tools, and clothing.

7. But with the great increase of people, and the making of political boundaries, this gradually changed. Some people remained tillers of the soil. Some obtained minerals from the earth. Some became the makers of all kinds of tools, and of labor-saving articles. Many gave their time to exchanging the products of one country with those of another.

8. The occupations of mankind are chiefly agriculture, mining, manufacture, commerce, and fishing. The distribution of these industries, as we shall hereafter see, is governed by laws over which man has but little control.

9. **Agriculture** includes all employments which concern tilling the soil or obtaining its products.

10. **Mining** includes such employments as concern the obtaining of metals and their ores from the earth.

11. **Manufacture** includes all employments by which raw materials are made into labor-saving articles, or things necessary to comfort.

12. **Commerce** is the exchange of products. Between people of the same country the exchange is called domestic commerce; between people of different countries, foreign commerce.

13. The means of exchanging goods is in itself a most important industry. The chief agents for carrying goods are railways, sailing-vessels, steamships, and canal-boats. In thinly-peopled countries, however, goods are often carried in wagons and on the backs of animals.

REVIEW LESSON.

What is meant by political and industrial geography?

Political and industrial geography tells about man, his government, ways of living, and occupations.

What are political divisions?

Political divisions are divisions of land whose boundaries are usually fixed by man. They are called empires, kingdoms, and republics.

What are the principal occupations of man?

The principal occupations of man are agriculture, mining, manufacture, commerce, and fishing.

What is meant by agriculture?

Agriculture is the employment which includes tilling and gathering the products of the soil.

What is mining?

Mining is the industry which includes the obtaining of metals and their ores from the earth.

What is meant by manufacture?

Manufacture is the industry by which the raw stuffs are changed into useful and labor-saving articles.

What is commerce?

Commerce is the exchange of goods and products.



NORTH AMERICA.

QUESTIONS ON THE MAP.

In what continent is North America? In what part of the continent is it? What grand division southeast? How many miles from north to south? (*Use scale of miles; measure along 82d meridian.*) How many miles from east to west? (*Measure along 50th parallel.*) In what direction is Asia from Alaska?—Greenland from Iceland?—South America from North America?

What oceans nearly surround North America? Which one is north?—east?—west and south? What great bay indents the northern part? What gulf in the southern part? What gulf in the eastern part?—in the western? What large bay between Canada and Greenland? What strait connects it with the Atlantic Ocean? What strait connects the Arctic and Pacific Oceans?—the Gulf of Mexico and the Atlantic Ocean? What channel connects the Gulf of Mexico and the Caribbean Sea?

What two large islands northeast of the mainland? What island east? What group north? What chain of islands extending from the Gulf of Mexico to South America? What peninsula projects from the southeastern part of the United States?—from the southwestern part? What isthmus joins South America to North America? Which is the more indented—the eastern or the western shore?—the northern or the southern? What is the northern cape of the mainland? What capes on the eastern coast?—on the western coast?

What is the principal mountain-system of North America? What system in the eastern part? What high peak in Alaska?—in Mexico?—in the western part of the United States?—in the eastern part? What river with its tributaries drains most of the United States? Name two large rivers in the Dominion of Canada. What river is the out-

let of the Great Lakes? What large river in Alaska? If you draw a line from Cape Hatteras to Bering Strait, through what lakes does it pass? Name the five largest lakes of this chain.

Name the countries of North America. To what country does the Dominion of Canada belong? *Ans.—To Great Britain.* To what country do Greenland and Iceland belong? *Ans.—To Denmark.* Which is the most important country? *Ans.—The United States.* Of what country is Alaska a part? *Ans.—Of the United States.* What is the capital of the Dominion of Canada?—of the United States?—of Mexico?

REVIEW.

Where is Alaska?—Greenland?—Dominion of Canada?—Mexico?—Iceland?—Newfoundland? Where are the United States?—the Central American States?—the West Indies?

Where is the Gulf of Mexico?—Baffin Bay?—Bering Sea?—Caribbean Sea?—Gulf of St. Lawrence?—Florida Strait?—Davis Strait?—Bering Strait?—Cape Hatteras?—Cape Prince of Wales?—Point Barrow?—Cape Race?—Cape San Lucas?—Cape Mendocino?

Describe the Mississippi River (*to describe a river, tell where it rises, its general direction, and into what it flows*)—the Yukon River—the St. Lawrence River—the Mackenzie River. Where is Lake Superior?—Lake Michigan?—Lake Huron?—Great Bear Lake?—Great Salt Lake?

Where is Washington?—Montreal?—New York?—Philadelphia?—New Orleans?—San Francisco?—Sitka?—Mexico?—Ottawa?

1. More than four hundred years before Columbus left Spain, an Icelander named Bjarne (*b'yorn*) was driven by a storm close to a land that was unlike any other he had seen. He was a man of brave spirit, and we may wonder why he did not leave his ship and examine the new country. It was because he was searching for his father, who had moved from Iceland to Greenland.

2. He knew that it was not Greenland, because he saw no snowy mountains. So he turned the bow of his boat away from the strange land, and, sailing for three or four days in a northeasterly direction, reached a land which he knew to be Greenland.

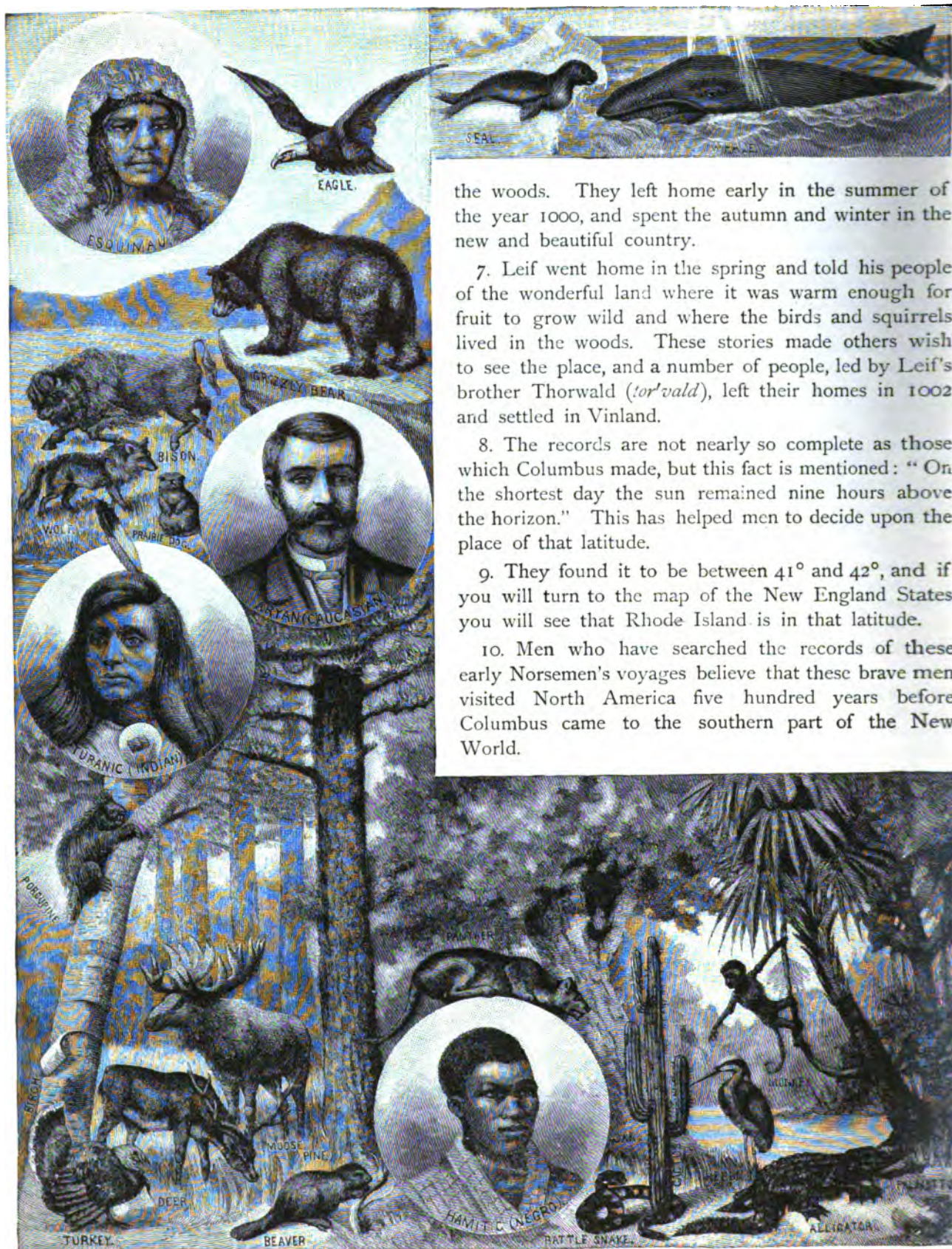
3. After a while Bjarne became tired of Greenland and went back to Norway. He told about his voyages and the unknown land he had seen.

Some of his friends were displeased because he had not gone ashore and so learned more about it.

4. He had a friend named Leif Erikson, and the stories made Leif wish to see this land for himself. He bought Bjarne's ship from him, and set sail with a good crew. After a voyage of many days they found a rocky island far to the southwest of Greenland.

5. They called it Helluland (now named Newfoundland), and landed there. After some days they started off, and, still sailing southwest, came to another place, which they called Markland (Nova Scotia). Leaving this place, they sailed for several days, and at last reached a land where they decided to stay during the winter.

6. They named the place Vinland, because of the thick vines covered with grapes which grew wild in



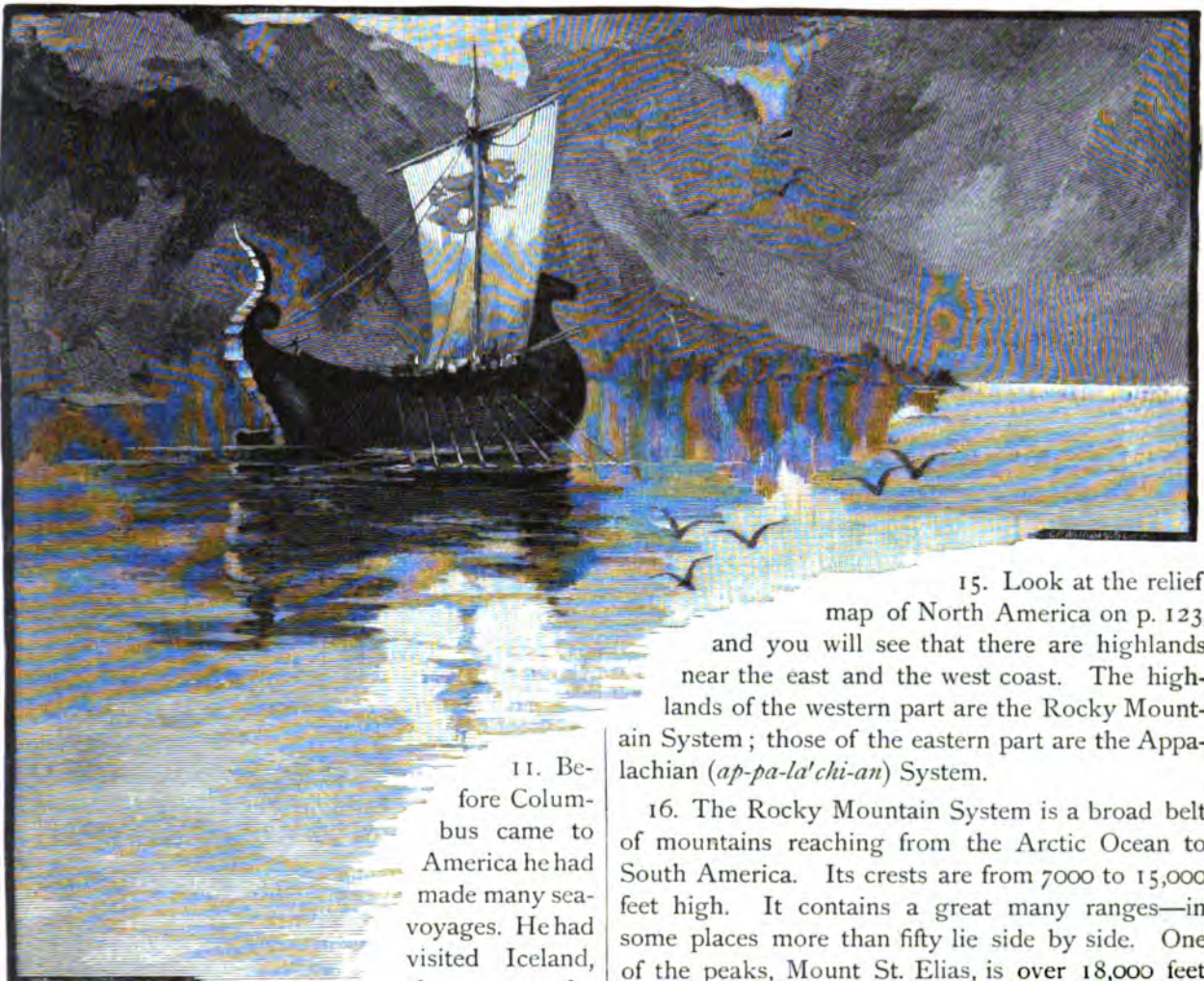
the woods. They left home early in the summer of the year 1000, and spent the autumn and winter in the new and beautiful country.

7. Leif went home in the spring and told his people of the wonderful land where it was warm enough for fruit to grow wild and where the birds and squirrels lived in the woods. These stories made others wish to see the place, and a number of people, led by Leif's brother Thorwald (*tor'vald*), left their homes in 1002 and settled in Vinland.

8. The records are not nearly so complete as those which Columbus made, but this fact is mentioned: "On the shortest day the sun remained nine hours above the horizon." This has helped men to decide upon the place of that latitude.

9. They found it to be between 41° and 42° , and if you will turn to the map of the New England States you will see that Rhode Island is in that latitude.

10. Men who have searched the records of these early Norsemen's voyages believe that these brave men visited North America five hundred years before Columbus came to the southern part of the New World.



The Voyage of Leif Erikson.

11. Before Columbus came to America he had made many sea-voyages. He had visited Iceland, and we may be sure he had heard

of the land to be reached by sailing southwest.

12. It was no easier then to get people to believe new things than it is now, and Columbus could not obtain money with which to fit out the ships he needed. He lost heart; and yet he could not give up his plans.

13. At last, after many disappointments, Queen Isabella of Spain fitted out three vessels, and on the 3d of August, 1492, Columbus left Palos, a city of Spain. He sailed in a westerly direction, and on the 12th of October, 1492, arrived at one of the Bahama Islands in the New World.

14. Because North America is the continent upon which we live, we ought to learn as much as possible about it. Looking at the map, we see that it is the northern grand division of the Western or American Continent.

15. Look at the relief map of North America on p. 123, and you will see that there are highlands near the east and the west coast. The highlands of the western part are the Rocky Mountain System; those of the eastern part are the Appalachian (*ap-pa-la'chi-an*) System.

16. The Rocky Mountain System is a broad belt of mountains reaching from the Arctic Ocean to South America. Its crests are from 7000 to 15,000 feet high. It contains a great many ranges—in some places more than fifty lie side by side. One of the peaks, Mount St. Elias, is over 18,000 feet high.

17. Many of the high peaks are volcanoes, and in the long chain of the Aleutian Islands (see map of Western Hemisphere) nearly every peak is a volcano.

18. The Appalachian System extends from Labrador almost to the Gulf of Mexico. It is not nearly so long as the Rocky Mountain System, and is less than one-third as high.

19. Between these two mountain-systems is a vast plain stretching from the Arctic Ocean to the Gulf of Mexico. A low rise called the Height of Land crosses this plain, turning some of the rivers northward and others southward.

20. Notice, too, the vast number of lakes in North America. Almost all of them are north of the Height of Land. In no other part of the world are there so many or such large lakes.

21. East of the eastern highlands there is a narrow plain called the Atlantic Plain, which reaches from the base of the mountains to the sea. Most of the large cities of the continent are in this plain.

22. The rivers of North America are among the largest in the world. The Mississippi, with its branches, drains nearly all of the plain south of the Height of Land.

23. The St. Lawrence, Mackenzie, and Nelson Rivers carry away the surplus waters of the great chain of lakes. The Columbia and Colorado Rivers drain the western highlands.

24. When Columbus and the explorers who came after him visited the New World they found none of the domestic animals which we now have. There were, however, many wild animals which have never been found in any other part of the world.

25. The deer, moose, black bear, wolf, and monkey were well known in the Old World, but the grizzly bear, the bison, the puma or panther, the musk-ox, the bald eagle, the turkey, and the alligator were all strange animals.

26. There is a broad belt of forest trees stretching nearly across the central part of North America, along the Height of Land. Still other belts of timber cover both the eastern and the western highland regions. Most of this forest consists of pine trees.

27. All along the river-bottom lands there is also much growing timber. But here instead of pine and fir trees we find oak, maple, and hickory.

28. The people of North America belong to three different races. Most of them are descendants of Europeans. The native people, however, are called Indians: they live by hunting and fishing.

29. There are also many people of the Negro race. They live chiefly in the southern part of the mainland and in the West Indies. The people of this race were first brought from Africa as slaves.

30. In the cold regions of the far north are people who are called Esquimaux (*es'ke-mo*). They are very short, and, like the Indians, live by hunting and fishing.

31. Now that we have studied about North America as a grand division, let us look at the map and see how it is divided. Beginning at the north, we find Danish America, British America,

the United States, Mexico, the Central American States, and a group of islands called the West Indies.

DANISH AMERICA.

32. Danish America includes Greenland, Iceland, and the islands that lie near these two countries. They all belong to Denmark.

33. **GREENLAND.**—In the year 876 an Ice-lander was driven by a storm so far from Iceland that he saw the snow-capped mountains of a distant land.

34. After a while a man named Erik the Red thought he would search for this land which the sailors had told about. He set sail and reached the southern part, and, because it was covered with vegetation, he named it Greenland.

35. Greenland is about one-fourth as large as the United States. The coast is broken by fjords, and the lowland shore is in no place more than twenty miles wide.

36. Farther inland nothing but ice and snow are to be seen. In some places the land rises as high as 7000 feet or even higher, and the slopes are covered with sheets of ice that form glaciers.

37. The climate is severe and the cold intense. Snow falls every month during the whole year. The southern part is less dreary, because of warm ocean winds.

38. We should not expect to find much plant-life in such a country; and yet mosses and birches grow in Greenland, and, during the short summer, poppies, Alpine roses, and other flowering plants.

39. Most of the people are Esquimaux. They depend upon the seal for their dress, and upon its oil for their fuel; even their beds are made of seal-skin. During the long winters the flesh of the seal is almost their only food.

40. Along the western coast there are trading-stations where Europeans live. They send away furs, fish-oil, and feathers or eider-down.

41. **ICELAND.**—Iceland is nearly as large as Pennsylvania, and lies about 250 miles east of Greenland. The surface is mountainous and volcanic, and there are many hot springs or geysers. Some of the volcanoes are now active.

42. The climate is milder than that of Greenland. Iceland moss is found in such quantities that the people export it to other countries. Large numbers of Iceland ponies, cattle, and sheep live on the wild grass which grows in the valleys.

43. The rivers and rocky inlets are full of salmon, trout, and cod. The fox is the only wild animal,

but the seal and whale and water-fowl are found along the coasts.

44. The people are noted for their bravery and their hospitality. Even the poorest are able to read and write. *Reikiavik* (rik'yā-vik) is the capital.

45. Trade is carried on by Danish merchants. The chief exports are fish, oil, wool, and feathers.

REVIEW LESSON.

When and by whom were the first voyages from Europe to America made?

The earliest known voyages were made by Bjarne and by Leif Erikson in the year 1000. They visited Newfoundland and Nova Scotia.

Where and by whom was a settlement made?

The first settlement is thought to have been made by Thorwald in Rhode Island.

What part of America was first visited by Columbus?

The Bahama Islands were first visited by Columbus in 1492.

Where are the highlands of North America?

The Western Highlands, or Rocky Mountain System, are on the Pacific coast; the Eastern Highlands, or Appalachian System, are near the Atlantic coast.

What do these highlands enclose?

These highlands enclose the Great Central Plain, which extends from the Arctic Ocean to the Gulf of Mexico.

What highland crosses the Great Central Plain near the centre?

The Height of Land, a low watershed, crosses the Great Central Plain.

What are the principal rivers of the Great Central Plain?

The Mississippi River and its tributaries drain the southern part of the Great Central Plain. The Mackenzie and Nelson drain the northern part.

What are the chief rivers of the Western Highlands?

The Yukon, Columbia, and Colorado Rivers drain the Western Highlands.

What river drains the Great Lakes?

The St. Lawrence River drains the Great Lakes.

What is said about the lakes of North America?

They are larger and more numerous than those

of any other grand division. The Great Lakes are the largest bodies of fresh water in the world.

What wild animals are native to the American Continent?

The grizzly bear, bison or buffalo, puma, musk-ox, bald eagle, turkey, and alligator are native to the American Continent. They are found chiefly in North America.

What animals are found in the arctic regions?

The sperm whale, seal, musk-ox, and polar bear are found in the arctic regions.

What valuable lumber is found in North America?

Broad belts of pine forests extend nearly across the central part, and along the highlands. Oak, maple, and hickory grow in the river-bottom lands.

What race of people are native to North America?

The American Indians and the Esquimaux are native to North America. The latter are short in stature and live in the arctic regions.

What people settled North America?

Colonies from Europe settled North America, and their descendants are the ruling people. The Negroes are the descendants of African slaves.

What does Danish America comprise?

Danish America comprises Greenland and Iceland.

What is said of Greenland?

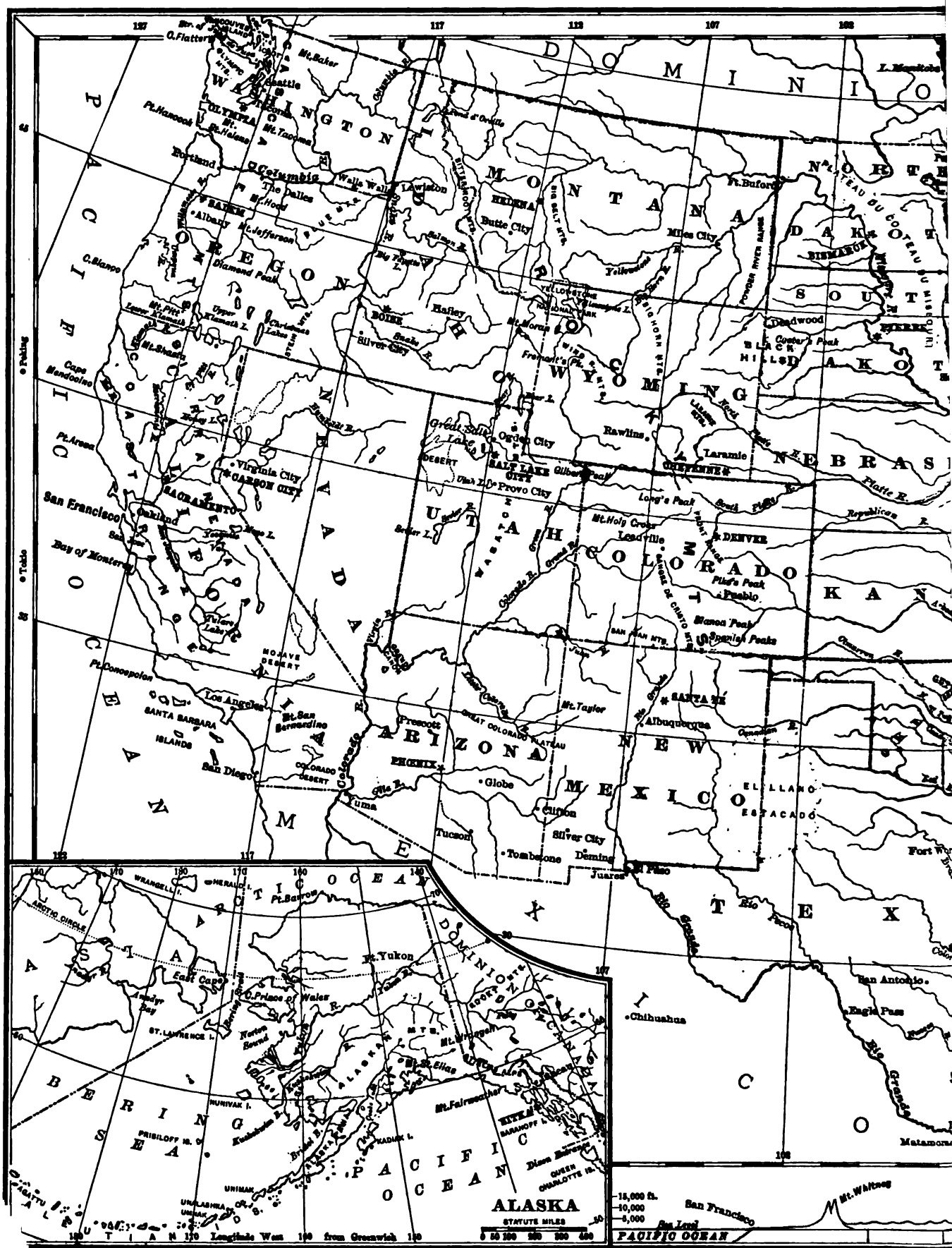
Greenland is covered with ice and snow. Most of the people are Esquimaux. There are Danish traders on the southern coast.

What is said of Iceland?

Iceland is noted for its volcanoes and geysers. The people are educated. Fish, oil, wool, and feathers are exported.

¹ TO THE TEACHER: The consideration of the physical features of North America should be carried on in connection with the moulding-board exercises. For class exercises the relief map should be

moulded with sand, as directed on p. 122, in the presence of the class. The individual maps of the pupils may be moulded in putty.





THE UNITED STATES.

QUESTIONS ON THE MAP.

In what part of North America is the United States? What parallel forms the greater part of the northern boundary? *Ans.—The 49th parallel.* What is the most southern point of the United States? What ocean east?—west? What country north?—south?—water south? What territory of the United States is in the north-western part of North America? *Ans.—Alaska.*

In what part are the highland regions? (*See relief map, p. 123.*) What do the Western Highlands include? *Ans.—A part of the Rocky Mountain System.* What do the Eastern Highlands include? *Ans.—The Appalachian System.* What is the region between the eastern and western rims of the Rocky Mountain System called? *Ans.—The Great Basin.* What plain between the mountain-systems?—east of the Appalachian highlands? *Ans.—The Atlantic Plain.*

What river, with its tributaries, drains the greater part of the United States? What river takes the waters of the Great Lakes to the ocean? What is the chief river of Alaska?

What cape projects from Massachusetts?—from North Carolina?—from the southern part of Florida?—from California?—from the western coast of Alaska? What peninsula projects from Alaska? What chain of islands southwest of Alaska?—southeast of the United States?

What group of lakes in the northeastern part of the United States? Which of them is wholly within the United States? What large lake in Utah? For what are most of the lakes of the Great Basin noted? *Ans.—They have no outlets.*

Which is the largest of the states?—the smallest? Which is the largest territory? *Ans.—Alaska.* Which state extends farthest

north?—south?—east?—west? What state is a peninsula? What state is the centre of the United States? How many states are there? How many territories?

What is the capital of the United States? Name two large sea-ports on the Atlantic coast—one on the Pacific coast—one on Lake Michigan. What large city near the mouth of the Mississippi River?

REVIEW.

Where is Long Island Sound?—Chesapeake Bay?—Gulf of Mexico?—Straits of Florida?—Bering Strait?

Where is Mount Desert Island?—Vancouver?—Long Island? Where are the Bahama Islands?—Santa Barbara?—Aleutian?

Where is Cape Cod?—Cape May?—Cape Hatteras?—Cape Sable?—Point Concepcion?—Cape Mendocino?—Cape Flattery?—Cape Prince of Wales?—Point Barrow?

Describe the Hudson River—Delaware—Mississippi—Colorado—Rio Grande—Columbia—Yukon—Missouri—Arkansas—Ohio.

Where is Lake Ontario?—Lake Erie?—Lake Huron?—Lake Michigan?—Lake Superior?—Lake of the Woods?—Yellowstone Lake?—Great Salt Lake?—Tulare Lake?

Where are the Appalachian Mountains?—Rocky Mountains?—Sierra Nevada Mountains?—Cascade Range?—Coast Range?—Mount St. Elias?—Pike's Peak?—Mitchell's High Peak?

Where is New York?—Boston?—Albany?—Philadelphia?—Washington?—Charleston?—Atlanta?—New Orleans?—Brooklyn?—Nashville?—Chicago?—St. Louis?—Denver?—St. Paul?—Santa Fé?—Cincinnati?—San Francisco?—Sitka?—Portland?

1. After Columbus visited America the Spaniards sent out many other expeditions. They made themselves owners of most of the West Indies, of Mexico, and of the Central American States.

2. For about a hundred years they were almost the only white people in North America. But other nations began to think that they, as well as the Spaniards, should have part of the New World.

3. In the year 1497 the King of England fitted out several ships, and gave the command of them to a sailor named Cabot. In June of that year Cabot re-discovered the land Leif Erikson had visited so many years before, and named it Newfoundland.

4. But many attempts were made before a colony really became settled, and several times did the people give it up, and go back to England.

5. At last, in 1607, a colony of English people was established at Jamestown, Virginia. Thirteen

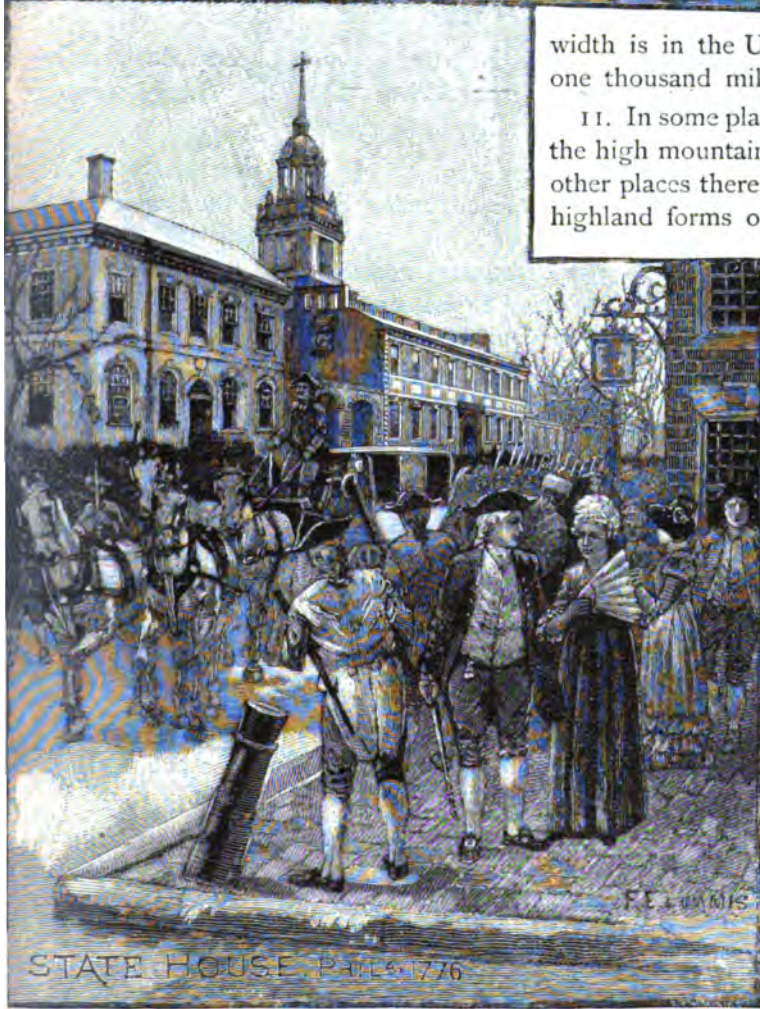
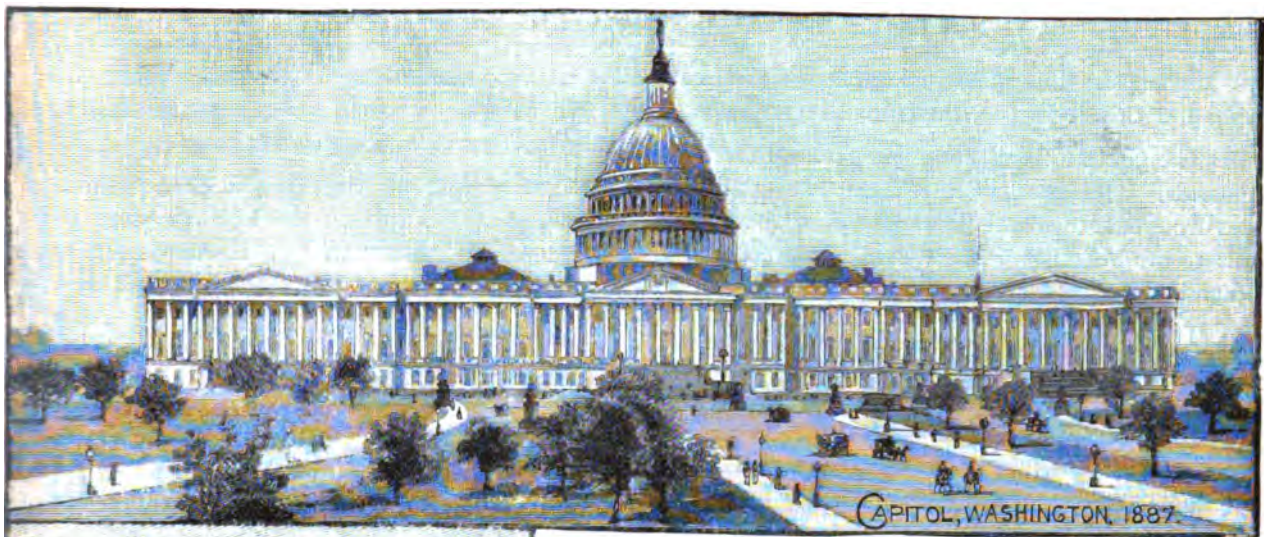
years afterwards another colony crossed the ocean and settled at Plymouth, Massachusetts.

6. Many other settlements were made, until finally there were thirteen English colonies on or near the Atlantic sea-coast.

7. At first they were governed by the King of England, but in 1776 they joined themselves together and formed a government called the United States.

8. From all parts of Europe there came people to live in the new country. They spread from the Atlantic Ocean to the Pacific Ocean, and built up one of the most powerful nations in the world.

9. The United States extends from the Atlantic Ocean on the east to the Pacific Ocean on the west. Its surface shows three natural divisions, the Western Highlands, the Eastern Highlands, and the Great Central Plain.



width is in the United States, where they reach more than one thousand miles from east to west.

11. In some places there are more than fifty ranges between the high mountains which form the rims of this system. In other places there are but few distinct ranges and the entire highland forms one vast plateau.

12. The Sierra Nevada and Cascade Ranges on the west and the Rocky Mountains proper on the east are the rims of this great highland. They enclose the Great Basin.

13. A part of the Great Basin is drained by the Columbia and Colorado Rivers, and is not, therefore, a true *basin*.

14. Between the Wasatch and Sierra Nevada, however, is a large extent of land entirely shut off from the ocean. The rivers all flow into shallow lakes called "sinks."

15. There are many lakes in this basin. A few of them are fresh, but most of them are salt. One of these, Great Salt Lake, is the largest salt lake in the American Continent.

16. The Columbia and Colorado Rivers are famous for the deep channels, called *cañons*, through which their waters flow to the sea. The Colorado flows through a narrow *cañon* whose vertical walls are, in places, more than a mile deep.

10. The Western Highlands are a part of the great mountain-system which extends the whole length of the American Continent. Their greatest

17. The Western Highlands produce gold and silver more abundantly than any other part of the world. Forests are extensive, and most of the val-

leys are fertile. But little rain falls in the Great Basin, and this region is, therefore, almost barren.

18. The Great Central Plain lies between the two highlands. This great plain is about two thousand miles from east to west. It slopes from the highlands to the Mississippi River, and from the Height of Land to the Gulf of Mexico.

19. The greater part of this valley is drained by the Mississippi River and its tributaries. This river, measured to the head-waters of the Missouri, is the longest river in the world, and has more than 20,000 miles of water on which river-steamers can ride.

20. That part of the Great Central Plain west of the Missouri River is called the Plains. It slopes so gently up to the foot of the Rocky Mountains that one can hardly imagine it anything but a level plain.

21. The Great Central Plain is a vast farming land. Although it is not thickly settled, it produces more grain and cotton than any other part of the world. It produces also a large amount of sugar.

22. The Eastern Highlands extend almost to the Gulf of Mexico. They include most of the ranges which form the Appalachian Mountain System.

23. The slopes of these mountains send the rivers east into the Atlantic, south into the Gulf of Mexico, and west into the Mississippi River.

24. From the base of these mountains to the ocean is the Atlantic Plain. It contains two-fifths of the population of the United States. Most of the large commercial and manufacturing cities of the United States are situated in this plain. The coast lowlands produce nearly all the rice grown in this country.

25. The vast beds of coal and iron ore, the extensive water-power of the streams, and the facilities for commerce, have made the Atlantic Plain one of the richest regions in the world.

26. There is nearly every kind of climate in the United States. In the southern part it is almost tropical, but in the northern part there are long, cold winters and warm, moist summers.

27. The climate of the Pacific Slope, however, is

different from that of any other part. Here there are two seasons, a rainy and a dry season. The winters are warm, and but little snow falls.

28. The people of the United States number nearly sixty-three millions. They represent several races—the descendants of European settlers, the native Indians, and the Negroes.

29. The descendants of European colonists are the ruling class. They are noted for their education, intelligence, and enterprise.

30. The Indians, of whom there are about 275,000, live mostly in the Western Highlands and Indian Territory. Some of the tribes are partly civilized, but most of them are still in a savage state.

31. The Negroes are the descendants of slaves brought from Africa. They are chiefly farm laborers and live in the southern part of the United States.

32. There are many Spanish Americans on the Pacific coast, who are descendants of the early Spanish explorers and the native Indians. Within a few years a great number of Chinese coolies have also come to this country from China.

33. In no other part of the world are there so many different kinds of employment as in the United States, and in no other country are laboring people so well paid and so independent.

34. Farming is carried on in the fertile valleys and plains, and mining in the highlands. Commerce and manufactures are the leading employments in the large cities.

35. All the important cities and towns are connected with one another by means of railways. From the seaports vessels exchange the products of industry for those of every other country in the world.

36. The United States is a republic formed by the union of forty-four states, six territories, and one district. The government is founded upon a written agreement called the Constitution.

37. Washington is the city in which Congress meets to make the laws of the country, and it is therefore the capital.

38. The chief officer is the President. He is

chosen every four years. It is his duty to see that the laws are obeyed.

39. Congress is the law-making department of the government. It is made up of a Senate and a House of Representatives.

40. Each state has a Constitution of its own, and the chief officer of the state is called a Governor.

41. The states are divided into counties, and these are again divided into cities and townships, or towns. Each county, city, and town has its own laws and officers.

42. In every state there are free public schools of all grades. In some states children are compelled by law to attend school.

REVIEW LESSON.

When were the first two English colonies founded?

A colony was founded at Jamestown, Virginia, in 1607, and one at Plymouth, Massachusetts, in 1620.

When did all the colonies become independent of England?

The colonies declared themselves independent of England in 1776.

What did they then become?

The colonies then became the United States of America.

What is said of the extent of the United States?

It is nearly three thousand miles across from east to west, and almost 1600 miles from north to south.

What are the chief physical divisions of the United States?

The chief physical divisions are the Western Highlands, the Eastern Highlands, and the Great Central Plain.

What is included in the Western Highlands?

The mountains of the Western Highlands belong to the Rocky Mountain System. They enclose the Great Basin.

What are some of the productions of the Western Highlands?

The Western Highlands produce gold, silver, and quicksilver in great quantities.

Of what do the Eastern Highlands consist?

The Eastern Highlands comprise the Appalachian System.

What is said of the Eastern Highlands?

Water-power is abundant, and there are vast mines of coal and iron.

What is the Atlantic Plain?

The Atlantic Plain is a lowland extending from the Appalachian Mountains to the Atlantic Ocean.

What is said of the Atlantic Plain?

More than two-fifths of the population of the

United States live in the Atlantic Plain. It is noted for its great cities, its industries, and its wealth.

What is the region between the great highlands called?

The region between the Eastern and Western Highlands is the Great Central Plain.

What is said of the climate of the United States?

The climate of the southern part is almost tropical. In the northern part there are long, cold winters and hot summers.

What is said of the climate of the Pacific Slope?

The climate of the Pacific Slope is warm. There are but two seasons, a rainy and a dry one.

What is said of the Great Basin?

In the Great Basin the lack of rain makes it an almost barren country.

Of what is the United States composed?

It is composed of forty-four states, six territories, and one district.

Upon what is the government founded?

The government is founded upon a written agreement called "The Constitution of the United States."

Who is the chief officer of the United States? and for how long a time is he chosen?

The President is the chief officer of the United States. He is chosen for four years.

Of what is the Congress composed?

Congress is composed of a Senate and a House of Representatives.

Who is the chief officer of each state?

The chief officer of each state is the Governor.

How are the states divided?

The states are divided into counties, and these are again divided into cities and townships, or towns.

What is said of education?

There are free public schools in every part of the country.

NEW ENGLAND STATES



400
SQUAR
MILE



NEW ENGLAND STATES.

QUESTIONS ON THE MAP.

Where are the New England States? How many are there? Which state extends farthest north?—south? Which is the largest state of the group?—the smallest? What country northeast? What water southeast?

Which of these states has the most coast? Which has no coast? What is the low land along the coast of these states called? *Ans.*—*The Atlantic Plain.* In what direction do most of the rivers flow? What is the general slope of the land? Which state has the most lakes?

Maine.—What country north? What state west? What bays indent the coast? What large island south? What river flows into Penobscot Bay? What large lakes in Maine? What is the group of lakes in the eastern part called? What other large rivers in the state? What mountain northeast of Moosehead Lake?

What and where is the capital?—the principal seaport? What large town on the Penobscot River?—on the Androscoggin River?

New Hampshire.—What country north?—state and ocean east?—state south?—west? How many miles of sea-coast has New Hampshire? *Ans.*—*Eighteen miles.* What cluster of mountains in the northern part? Name two peaks of this cluster. What mountain in the southern part? What is the largest lake in this state? What river is its outlet?

What and where is the capital? What other two cities on the same river? What is the chief seaport?

Vermont.—What country north? What state east?—south?—state and lake west? What river flows between New Hampshire and Vermont? What range of mountains cross the state from north to south? In what general direction do the rivers flow?

What and where is the capital? What city on Lake Champlain?—south of the central part of the state?

Massachusetts.—What states north?—west?—south? What water south and east? What bays indent the coast? What capes along the coast? What two large islands belong to this state? What part of the state is mountainous? Name the mountains. What peak near the Connecticut River?

What and where is the capital? What cities in the northeastern part? What city in the central part of the state?

Rhode Island.—What state north and east?—west? What water south? What bay indents the southeastern coast? What cape or point on the coast? Name the capitals. What two cities in the northeastern part?

Connecticut.—What is the general slope of this state as shown by the rivers? What state north?—east?—west? What water and island south? What river divides the state into two almost equal parts? What mountains in the western part?

What and where is the capital? Name two seaports.

REVIEW.

Name the states of this group. Give the capital and the largest city of each.¹

Where are the White Mountains?—Hoosac Mountains?—Green Mountains?—Mt. Katahdin?—Mt. Monadnock?—Mt. Holyoke?—Greylock Mt.?—Mt. Mansfield?

Where is Cape Elizabeth?—Cape Cod?—Point Judith?

Where is Machias Bay?—Penobscot Bay?—Cape Cod Bay?—Buzzard's Bay?—Narragansett Bay?

Describe the Penobscot River—the Kennebec—the Merrimac—the Connecticut. Where is Moosehead Lake?—Winnipiseogee Lake?

Where is Augusta?—Portland?—Bangor?—Lewiston?—Concord?—Manchester?—Portsmouth?—Boston?—Lowell?—Worcester?—Providence?—Newport?—Hartford?—New Haven?

1. Nearly three hundred years ago Captain John Smith explored the northeastern part of the United States and made an excellent map of the coast. He called the country *New England* in honor of his native land.

2. Six years after, in 1620, a colony of English people, known as the Pilgrim Fathers, landed at the place where the town of Plymouth is now built, and made the first settlement. Other settlements were afterwards made, and these colonies finally became the New England States.

3. There are six states in this group—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island,

and Connecticut. They form the northeastern group of the United States.

4. There is a narrow strip of lowland along the coast, but elsewhere the land is rugged and mountainous. Lakes and ponds dot the highlands, and dense forests of pine and oak cover their surface.

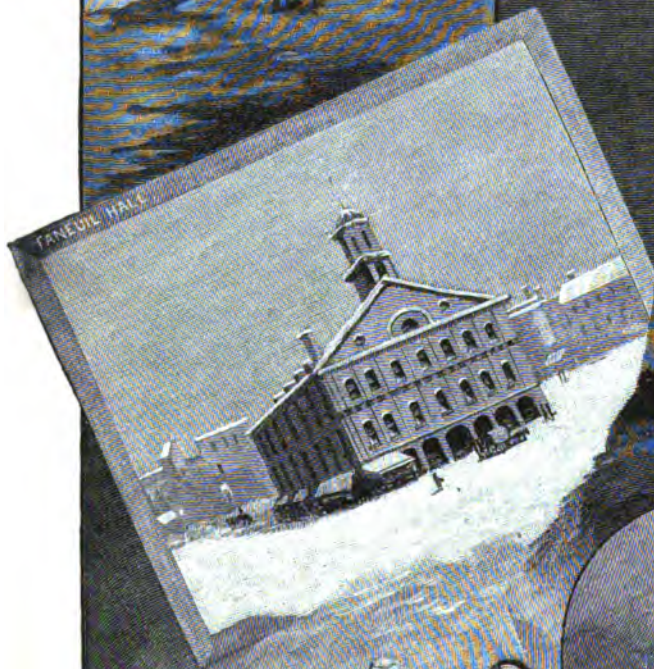
5. The climate of these states, especially in the northern part, is severe. The short, hot summers are followed by long and cold winters.

6. The streams which flow from the highlands are used to turn the mill-wheels, and all over New

¹ The capital of each state is in **THIS TYPE**, the largest city in **THIS TYPE**, other important cities in **this type**.



RETURN OF THE MAYFLOWER.



THE CALL TO ARMS.

England thousands of factories have been built, in which nearly every kind of useful article is made.

7. The fisheries are of more value than those of any other part of the United States. Many people are kept at work catching and curing mackerel, codfish, and herring.

8. **Maine.**—Maine is the largest state of this group. It extends farther east than any other state in the Union. The sea-coast is long, broken, and skirted with islands. There are many lakes, of which Moosehead is the largest.

9. The northern part is covered with forests, chiefly of spruce and pine. Every winter lumbermen are busy cutting the timber, which is floated down the rivers to the different markets. Many vessels are built in Maine.

10. *Augusta* is the capital. *Portland*, the largest city, has a fine large harbor, where there are ships from all parts of the world. *Bangor* is a great lumber market.

11. **New Hampshire.**—This state has but eighteen miles of sea-coast. In the central part

is a cluster of peaks called the White Mountains, several of whose summits are more than a mile high. Mount Washington is the highest peak.

12. The state is well wooded. A fine, hard building-stone called granite is extensively quarried.

13. *Concord* is the capital. *Manchester* is a large city, where cotton goods and steam fire-engines are manufactured. *Portsmouth* is the only harbor.

14. **Vermont.**—Vermont is the only state of this group which has no sea-coast. It is noted for fine horses and cattle, and for its quarries of beautiful marble. There are many maple-trees, and the greater part of our maple-sugar comes from Vermont.

15. *Montpelier* is the capital. *Rutland* is near the white-marble quarries. *Burlington* is a lake-port, and an important lumber-market.

16. **Massachusetts.**—This state includes the islands of Martha's Vineyard and Nantucket. The land along the coast is low. In the west are the Berkshire Hills and the Hoosac Mountains.

17. Massachusetts is one of the most thickly-peopled states in the Union. It is also one of the first in the value of manufactures and fisheries.

18. *Boston*, the capital, is noted for its schools and fine libraries. It is the chief leather-goods market in the world. *Lowell* has many cotton-factories. *Worcester*, in the central part of the state, is one of the richest cities in New England.

19. **Connecticut.**—Connecticut is among the leading manufacturing states. More cutlery, watches, sewing-machines, and clocks are made in Connecticut than in all the rest of the United States. The southern part is low land, and in the centre of the state are the rich farm-lands of the Connecticut Valley.

20. *Hartford* is the capital. *New Haven* is the seat of Yale College, one of the oldest universities in the United States.

21. **Rhode Island.**—Rhode Island is the smallest and most thickly-peopled state in the Union. Some of the largest cotton-mills in the United States are in Rhode Island.

22. *Providence*, one of the capitals, is the largest city. More jewelry is made here than in any other city in the Union. *Newport*, also a capital, is a noted summer resort.

REVIEW LESSON.

Name the states of this group. Give the capital and the largest city of each.

By whom were the New England States first settled?

The New England States were first settled by people called the Pilgrims. They landed at Plymouth in 1620.

What is said of the surface of this section?

Most of the coast is low. The interior is rugged and mountainous. Lakes and ponds are numerous.

What is said of the climate?

The winters are long and cold. The summers are short and warm.

What are the chief resources of these states?

The chief resources of these states are the vast forests of pine, and the quarries of granite and marble.

What is said of the rivers?

Few of the rivers are navigable. Their swift currents and falls are used to turn the wheels of mills.

What is said of the fisheries?

The fisheries are more extensive than those of any other group of states.

What is the employment of most of the people?

Most of the people are employed in manufactures, in the fisheries, and in commerce.

For what is Maine noted?

Maine is noted for its extensive pine forests and its shipbuilding.

For what are New Hampshire and Vermont noted?

New Hampshire and Vermont are noted for their fine horses and cattle, and their quarries of granite and marble.

For what are Massachusetts, Rhode Island, and Connecticut noted?

More cotton goods, leather goods, watches, clocks, jewelry, sewing-machines, and fire-arms are made in these states than in any other part of the continent.

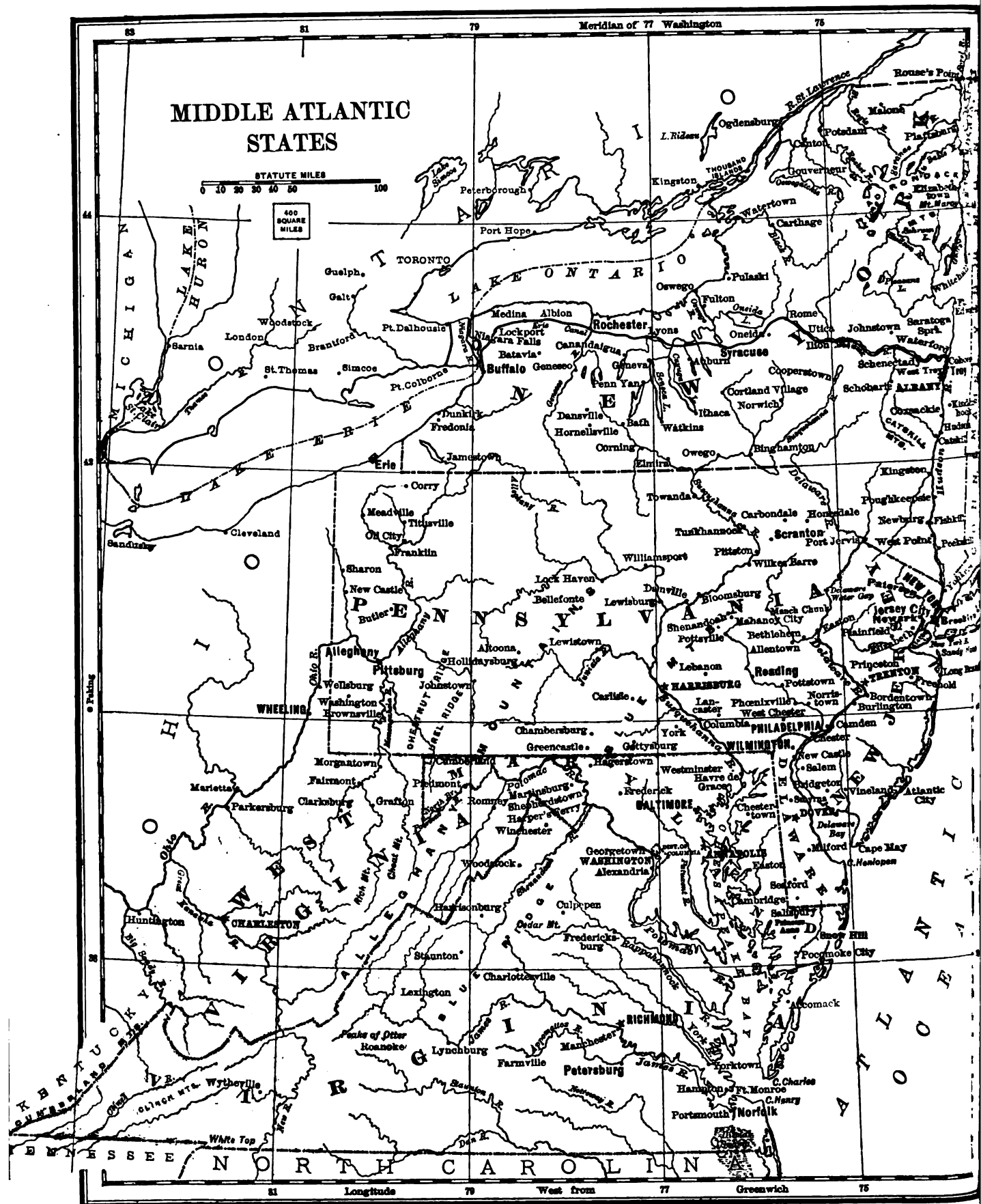
What are the chief commercial centres of these states?

Boston and Portland are the chief seaports. Lowell, Manchester, and Providence are noted for cotton-manufactures.

MIDDLE ATLANTIC STATES

STATUTE MILES
0 10 20 30 40 50 100

400 SQUARE MILES



MIDDLE ATLANTIC STATES.

QUESTIONS ON THE MAP.

Name the states that form this group. What countries of Europe are in the same latitude? (*See margin of Map.*) What country of Asia? Which of these states border on the lakes?—on the ocean? Into what do the rivers of the northern part flow?—the eastern part?—the western part?

Which state has the greatest number of lakes? The Eastern Highlands include a part of what mountain-system? *Ans.—The Appalachian Mountain System.* What is the general direction of the mountains? What state of this group lies entirely in the Atlantic Plain? What large island east?

New York.—What lakes form part of the northern boundary? What states east of New York?—south? Where are the highlands of this state? What peak in the Adirondack Mountains? What large lake between Vermont and New York? What river in the eastern part flows into New York Bay? Into what do the rivers of the northeastern part of the state flow? What river connects Lake Erie and Lake Ontario?

What and where is the capital?—the largest city? What city on Lake Erie?—near Lake Ontario?—near the centre of the state?

Pennsylvania.—What parallel forms part of the northern boundary? What state and lake north?—river east?—states east?—south?—west? What mountain-ranges in Pennsylvania? What large river crosses the eastern part of the state? What river in the northwestern part?

What and where is the capital?—the largest city? What two cities in the western part? At the head of what river are they situated?

New Jersey.—What state north? What ocean east? What bay and river west? Where are the highlands in New Jersey? What bay indents the southern coast? What cape at the southern extremity? By what is the coast bordered? *Ans.—By low, sandy, wave-formed islands.*

What and where is the capital?—the largest city? What two cities near Jersey City? What city opposite Philadelphia, Pa.?

Delaware.—What state north?—bay and ocean east?—state south and west? What can you say as to the size of this state? In what plain does Delaware lie? What cape on the eastern coast?

What and where is the capital?—the largest city?

Maryland.—In what part of the state are the highlands? What

bay almost divides Maryland into two parts? What river flows into it in the northern part? What river between Maryland and Virginia? Into what does it flow?

What and where is the capital?—the largest city?—the chief seaport?

District of Columbia.—What river between this District and Virginia? What city in this District?

Virginia.—What is the general slope of the land in the eastern part of Virginia? What three rivers of this state flow into Chesapeake Bay? In what direction does the Shenandoah River flow? Why? *Ans.—Because the valley slopes towards the north.* What mountains in Virginia? What peaks in the Blue Ridge? What swamp in the southeastern part?

What and where is the capital? What city south of the capital? What important city near the mouth of the James River?

West Virginia.—What state southeast? What two rivers form the western boundary? What river flows across the southern part of the state into the Ohio River? What is the general slope of the surface?

What and where is the capital? What city in the northwestern part of the state? What name is given to the region west of Pennsylvania? *Ans.—The Pan-Handle.*

REVIEW.

How many states in this section? Which has the greatest number of lakes?—the most highland? Which is the smallest state? Which is almost divided into two parts by Chesapeake Bay?

Where are the Adirondack Mountains?—the Catskill?—the Blue Ridge?—the Alleghany?—Mount Marcy?—Cedar Mt.?—Peaks of Otter?—Chestnut Ridge?—Laurel Ridge?

Where is Oneida Lake?—Cayuga?—Seneca?—Long Island Sound?—Delaware Bay?—Chesapeake Bay?—Dismal Swamp?

Describe the Hudson River—the Delaware—the Susquehanna—the Alleghany—the Potomac—the James—the Great Kanawha.

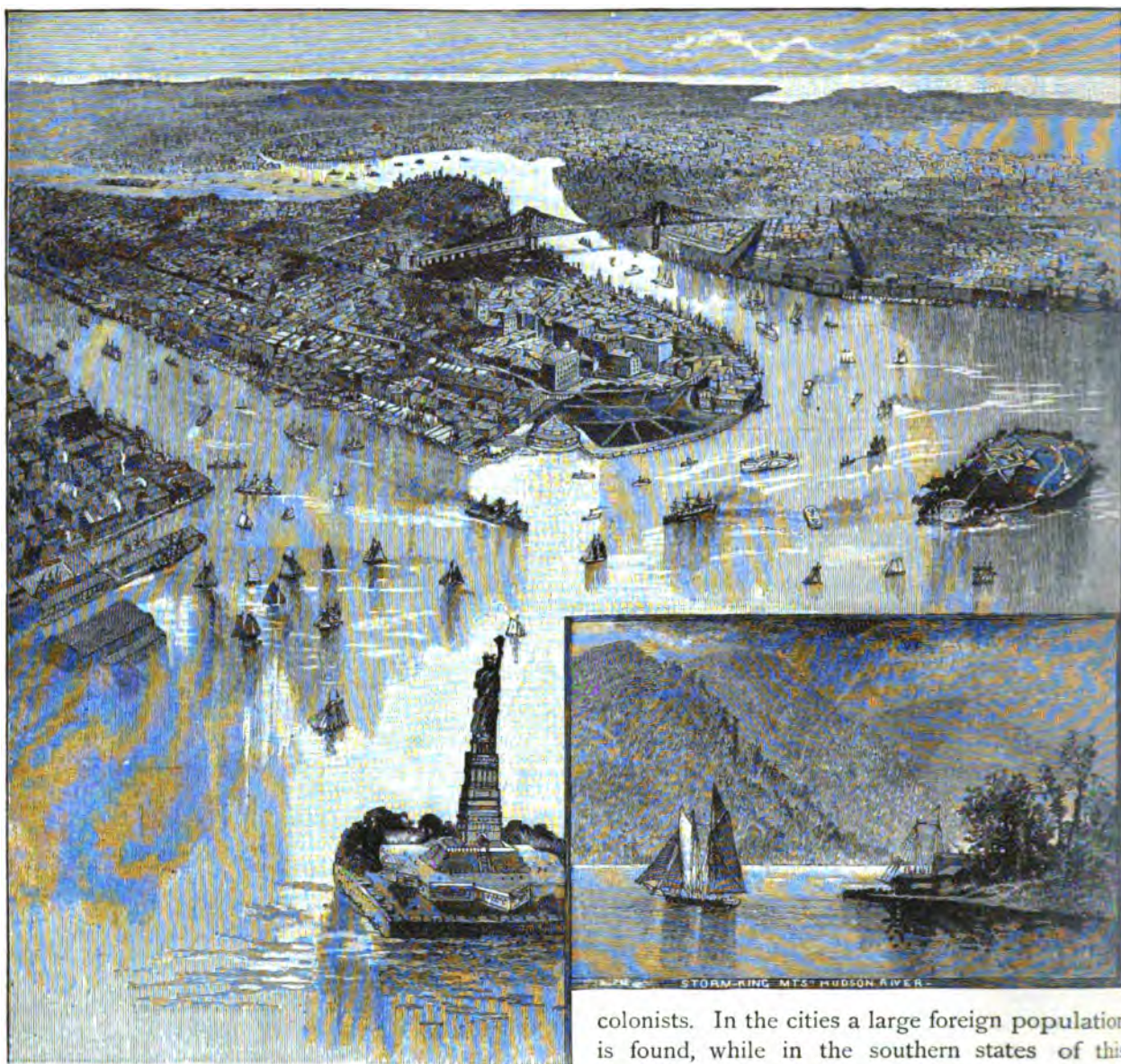
Where is Albany?—New York City?—Buffalo?—Philadelphia?—Pittsburg?—Harrisburg?—Jersey City?—Trenton?—Newark?—Dover?—Wilmington?—Baltimore?—Annapolis?—Richmond?—Washington?—Norfolk?—Charleston?—Wheeling?

1. The Middle Atlantic States comprise New York, Pennsylvania, New Jersey, Delaware, Maryland, Virginia, and West Virginia. They are southwest of the New England States, and are about twice as large.

2. These states are mainly in the Eastern Highlands and the Atlantic Plain. The northern part slopes towards the Great Lakes, the western part

towards the Ohio River, and the eastern part towards the Atlantic Ocean.

3. The ranges of the Appalachian System cross this section from northeast to southwest. The principal ranges are the Alleghany and the Blue Mountains. The highest peaks, however, are the clusters of the Adirondacks and the Catskills.



NEW YORK CITY AND HARBOR.

4. Because these states extend so far north and south, there is a great variety of climate. In the north the winters are very cold, but in the southern part they are moderate and pleasant. There is an abundance of rain in every part.

5. The soil of the river-valleys is very fertile, but along the coast it is sandy and poor. Much of the coast-plain consists of swamps.

6. The highland regions are noted for the great quantities of iron, coal, petroleum, and salt which are produced. Nickel and zinc are also found.

7. The people are chiefly descendants of the early

colonists. In the cities a large foreign population is found, while in the southern states of this group there are many colored people.

8. **New York.**—New York is the largest state of this division. In the eastern part the land is mountainous and covered with forests.

9. There are two groups of lakes in the state—one in the northeastern, the other in the central part. Like those of the New England States, they are long and narrow.

10. New York Bay is one of the finest harbors in the world. Vessels from every port are constantly coming and going. New York has also a long lake coast, and is the leading state in commerce.

11. From the farms of New York come great quantities of butter, cheese, grain, and wheat; while the orchards and gardens yield fruits and vegetables. New York is often called the "Empire State" because of the number of its people, the wealth of its products, and the extent of its commerce.

12. *Albany* is the capital. It is at the eastern end of the great Erie Canal, which crosses the state from Lake Erie to the Hudson River. By means of this canal the produce of the west can be carried by water to the Atlantic Coast.

13. *New York City*, at the mouth of the Hudson River, is the largest city on the Western Continent and one of the largest in the world.

14. *Brooklyn*, the fourth city in the United States, is connected with New York City by

a bridge built over the East River. This bridge is the longest suspension bridge in the world.

15. *Buffalo* is the metropolis of the western part of the state. It is the western end of the Erie Canal, and is a great lake-port and grain market.

16. *Pennsylvania*.—This state is more or less rugged. Mountain-ridges cross it from northeast to southwest. It has no sea-coast, but the Delaware River and Bay afford an easy passage to the Atlantic Ocean.

17. Pennsylvania ranks first in producing useful minerals. Nearly all the petroleum, half the iron, and two-thirds of the coal produced in the United States come from this state.

18. Most of the iron vessels built in the United States are

constructed in Pennsylvania. In the number of people, and in the value of the manufactures, this state is second to New York.

19. *Harrisburg* is the capital. *Philadelphia* is the third city of the United States in population. It is noted for its factories and mills, and is one of the greatest coal markets in the world. More than five hundred trains enter and leave the city every day.

20. *Pittsburg* is noted for its manufactures of iron and glass. This city is lighted and heated by natural gas, which abounds in that region.

21. *New Jersey*.—The low shores of New Jersey are bordered by islands thrown up by the waves and tides. In the north the land is rugged. The central part of the state is a vast garden, in which fruits and vegetables are raised for the New York and Philadelphia markets. More than half the cranberries raised in this country are grown in New Jersey.

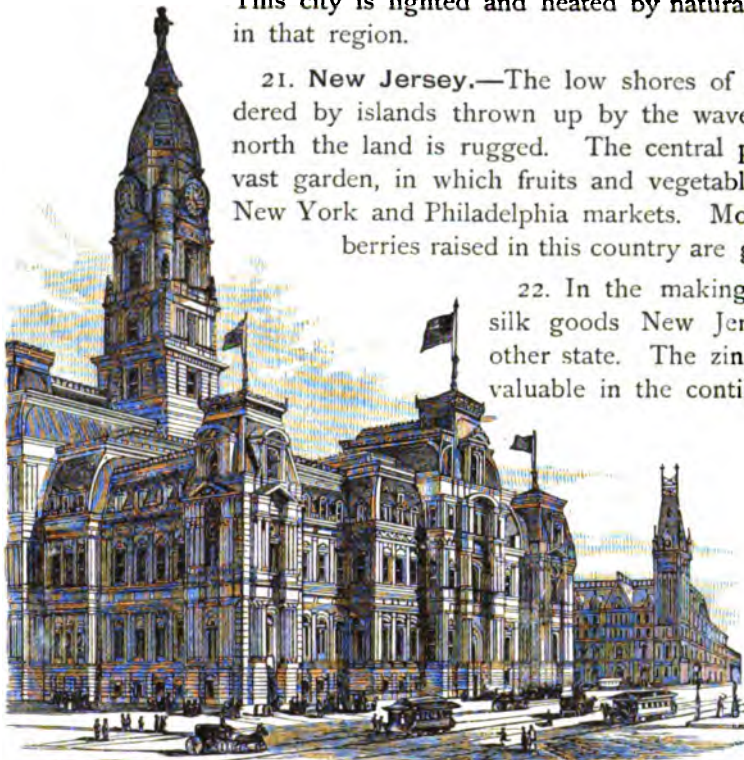
22. In the making of fine pottery and silk goods New Jersey surpasses every other state. The zinc-mines are the most valuable in the continent.

23. *Trenton* is the capital. It has the most extensive potteries in the United States. *Newark*, the largest city, is a great manufacturing centre. Jewelry, rubber goods, leather goods, and many other articles are made here.

24. *Jersey City* is the centre of a great railway business. Many foreign steamships land here. *Paterson* has the largest silk-factories in the United States.

25. *Delaware*.—Delaware is the smallest state except Rhode Island. The surface is low, and the soil and climate make it a fine country for fruit, vegetables, and wheat. Peach-growing is one of the chief industries.

26. *Dover* is the capital. *Wilmington* has one of the largest locomotive



Public Buildings, Philadelphia.



Pittsburg and Allegheny City.

and railway-car factories in the United States. Many iron vessels are built here.

27. **Maryland.**—The Appalachian Mountains cross the western part of Maryland, and Chesapeake Bay almost divides the state into two parts. The smaller of these is called the Eastern Shore.

28. The soil is a sort of sandy clay, well suited to the raising of fruit, grain, and tobacco.

29. The oyster-beds in Chesapeake Bay produce the finest of oysters, and thousands of bushels are taken from them every year. The swamp-lands near the bay abound in wild water-fowl.

30. *Annapolis*, the capital, is on the western shore of the bay, and has a naval school where boys are fitted for the United States navy.

31. *Baltimore* is the largest city and seaport. It is noted for its large flour-mills, cotton-factories, and fruit- and oyster-canneries.

32. **The District of Columbia.**—The District of Columbia lies on the eastern shore of the Potomac River. It contains about 70 square miles, and was given by Maryland to the United States for the use of the government.

33. *Washington* is the capital of the United States. It is noted for its broad streets and beautiful marble buildings.

34. The building in which the President lives is called the White House. Congress meets to make laws for the whole country in a magnificent structure

called the Capitol. Washington Monument is the highest in the world.

35. **Virginia.**—The western part of Virginia is very mountainous; the central part is high rolling land which slopes towards the ocean; the eastern part is low and marshy and forms a part of the Atlantic Plain. Mineral springs are found throughout the highlands.

36. The valleys are noted for the large crops of tobacco, wheat, and corn which they produce.

37. The land between the Alleghany Mountains and the Blue Ridge is often spoken of as the "garden-spot of Virginia," because it is so fertile.

38. *Richmond* is the capital and largest city. It has large flour-mills, tobacco-factories, and iron-works. *Norfolk* has one of the finest harbors on the Atlantic Coast, and is the principal seaport.

39. **West Virginia.**—Nearly all of West Virginia lies in the Mississippi Basin. The surface is mountainous, with forests of oak and hemlock growing on the uplands. The valleys of the Potomac and Shenandoah Rivers are noted for their beautiful scenery.

40. The state ranks high in the production of coal, iron, petroleum, and salt. Sheep-raising and dairy-farming are carried on.

41. *Charleston*, the capital, is the centre of the salt region. *Wheeling* is the largest city, and is engaged in iron and other manufactures.

REVIEW LESSON.

Name the states of this group. Give the capital, largest city, and principal seaport of each.

Where are the Middle Atlantic States situated?

The Middle Atlantic States are situated mainly in the Eastern Highlands and the Atlantic Plain.

How does their surface slope?

Their surface slopes northward towards the Great Lakes, eastward to the Atlantic Ocean, and westward towards the Ohio River.

What mountain-ranges extend along this section?

The Alleghany and Blue Mountains extend from northeast to southwest. The clusters of the Adirondack and Catskill Mountains are in the northern part.

What are the principal rivers of these states?

The Hudson, Delaware, and Potomac Rivers are the largest streams of the eastern slope; the Ohio, of the western; and the St. Lawrence, of the northern.

What is said of the soil of these states?

Along the river valleys the soil is fertile, but on the coast it is sandy and poor.

What of the climate of these states?

In the northern part the winters are long and cold; in the southern part they are mild. The summers are warm and moist.

What is said of the minerals of the states of this group?

The highland regions produce more coal, iron-ore, and petroleum than any other part of the United States.

What are the chief occupations of the people?

Farming is the chief occupation in the fertile river-valleys, mining in the highlands, and commerce and manufactures along the coast.

In what does New York excel?

New York is the foremost state of the Union in wealth and population. Its dairy- and orchard-products exceed those of any other state.

For what is New York City famous?

New York City is the largest city in the Western Continent. Its manufactures, commerce, and wealth surpass those of any other city.

What other important cities in New York?

Brooklyn is the fourth city in size in the United States. Buffalo is a lake-port and grain market.

For what is Pennsylvania noted?

Pennsylvania produces half the iron, two-thirds of the coal, and the greater part of the petroleum and natural gas obtained in the United States.

What is said of Philadelphia?

Philadelphia is the third city of the United States in population. It is noted for the great variety and value of its manufactures.

For what is Pittsburg noted?

Pittsburg is noted for its iron, steel, and glass manufactures. The city is lighted and heated by natural gas.

What is said of New Jersey?

In the northern part manufacturing is the chief industry; in the southern part, garden-farming.

In what does New Jersey excel?

More fine pottery and silk goods are made than in any other state. More cranberries are grown than in any other state.

For what are Trenton and Paterson noted?

Trenton manufactures more pottery, and Paterson more silk, than any other city in the Union.

For what is Delaware noted?

Delaware is noted for its peach orchards, and for its locomotive and iron steamship building works at Wilmington.

In what does Maryland excel?

Maryland has the most extensive oyster-fisheries in the world.

What is said of Annapolis?—of Baltimore?

Annapolis is the seat of the United States Naval Academy. Baltimore contains many cotton factories. It has also a large foreign commerce.

What is the District of Columbia?

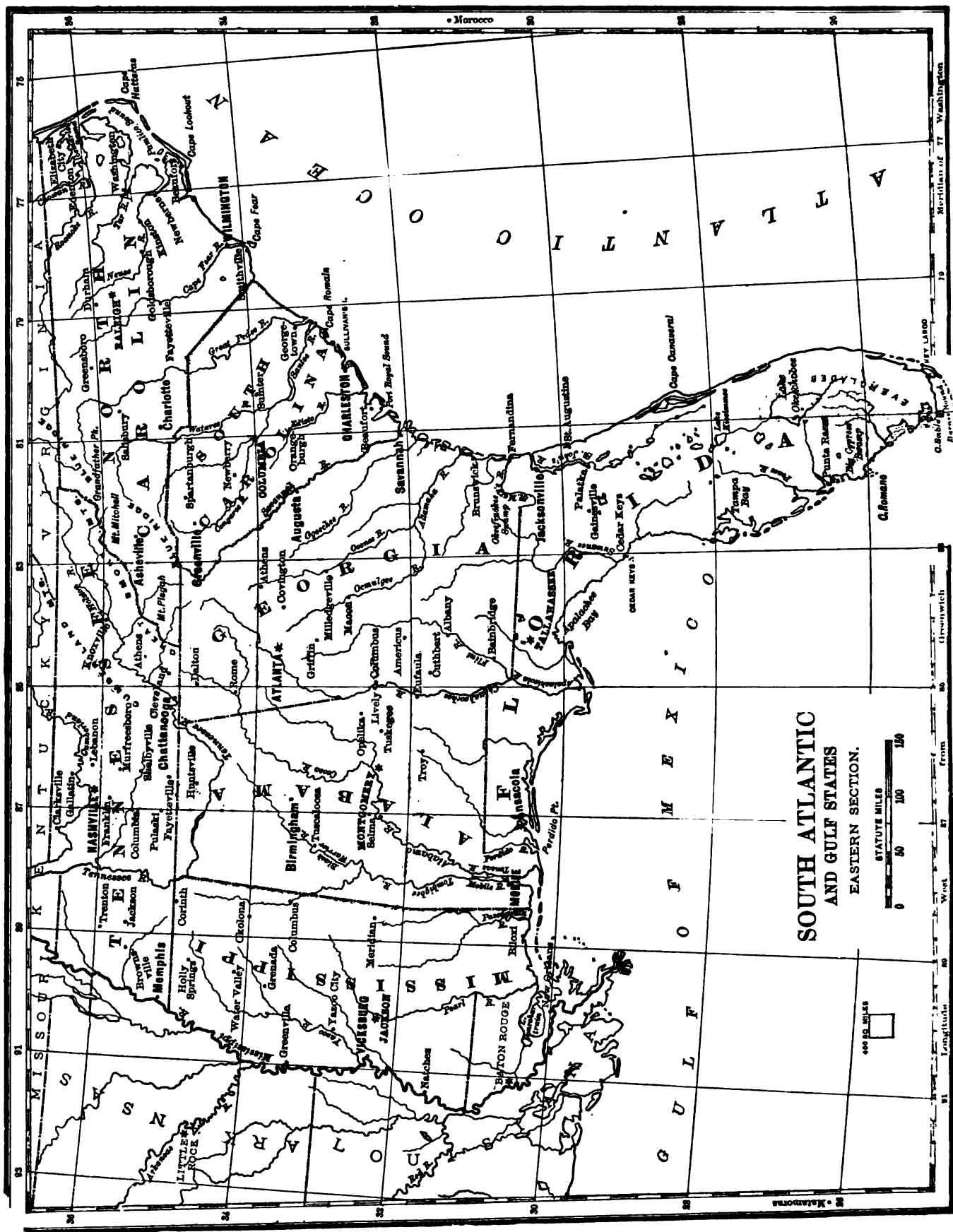
The District of Columbia is a tract of land set apart for the use of the government. It contains Washington, the capital of the United States.

For what is Virginia noted?

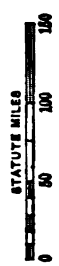
Virginia is one of the oldest of the United States. It produces large crops of tobacco.

In what does West Virginia excel?

West Virginia is among the first states in producing iron, salt, and petroleum. Most of the nails made in the United States are made in Wheeling.



SOUTH ATLANTIC
AND GULF STATES.
EASTERN SECTION.



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SOUTH ATLANTIC AND GULF STATES.

EASTERN SECTION.

QUESTIONS ON THE MAP.

Name the states of this section. In what part of the United States are they? Which are on the Atlantic coast?—on the Gulf coast? Which has the most sea-coast?—no sea-coast? What ocean east?—gulf south?

What ranges of mountains in this section? To what system do they belong? In which range is Mt. Mitchell? What is the most eastern point of land called? What group of islands south of Florida? Of what are they formed? *Ans.*—*They are coral reefs.*

North Carolina.—What state north?—west?—ocean east?—two states south? What sounds indent the coast? What three capes on this coast? What mountain-peaks in the western part? What river flows into Albemarle Sound?—into the Atlantic Ocean near Wilmington?

What and where is the capital? What city at the mouth of the Neuse River?—at the mouth of Cape Fear River?

South Carolina.—What state north?—ocean south-east?—state southwest? What is the slope of this state? What river separates it from Georgia?

What and where is the capital?—the largest seaport? **Georgia.**—Is the northern part of Georgia high or low land? What states north?—state and ocean east?—state south?—west? What swamp in the southeastern part?

1. This group of states forms the southeastern part of the United States. It consists of Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, and Texas, together with Indian and Oklahoma territories. The latter includes the strip of public land formerly known as "No Man's Land."

2. North Carolina, South Carolina, and a part of Georgia and Florida are chiefly in the Atlantic Plain. All the others are in the

What and where is the capital? What two cities on the Savannah River?

Florida.—What natural division of land is Florida? What waters surround it? What states north? What name is given to the swamp in the southern part? What lake in the southern part? What cape projects from the eastern coast? What chain of islands south of the mainland? What river flows into the ocean near Jacksonville?

What and where is the capital? What and where is the largest city? What city in the northeastern part?

Alabama.—What state north?—east?—state and gulf south?—state west? Where is the high land? What river crosses the northern part of the state? Into what does it flow? What is the general direction of the other rivers? What two rivers unite and flow into the Gulf of Mexico?

What and where is the capital?—the chief seaport? What city north of the centre of the state?

Mississippi.—What state north?—east?—gulf and state south?—river west? What river flows into the Mississippi near Vicksburg?

What and where is the capital?—the largest city?

Gulf Slope, which includes the lower part of the Mississippi Basin.

3. The Eastern Highlands extend into these states. The highest peak, Mount Mitchell, is in the Great Smoky Mountains, a range of the Appalachian System.

4. There is a terrace of land along the entire coast, about one hundred and fifty miles from it. Nearly all the land below this terrace has been made from the mud and silt brought down by the rivers.

Tennessee.—What mountains in Tennessee? What states north?—state east?—three states south?—river west? What and where is the capital?—the largest city? What city on the Tennessee River?—on the Mississippi River? Into how many parts does the Tennessee River divide the state?

REVIEW.

Name the states of this group. (*See also map of Western Section.*) Which of them has the most coast? Which border on the Atlantic?—on the Gulf of Mexico?

Where is the Blue Ridge?—Great Smoky Range? Where is Mt. Mitchell?

Where is Albemarle Sound?—Pamlico Sound?—Barnes Sound?—Apalachee Bay?—Cape Hatteras?—Cape Lookout?—Cape Sable?

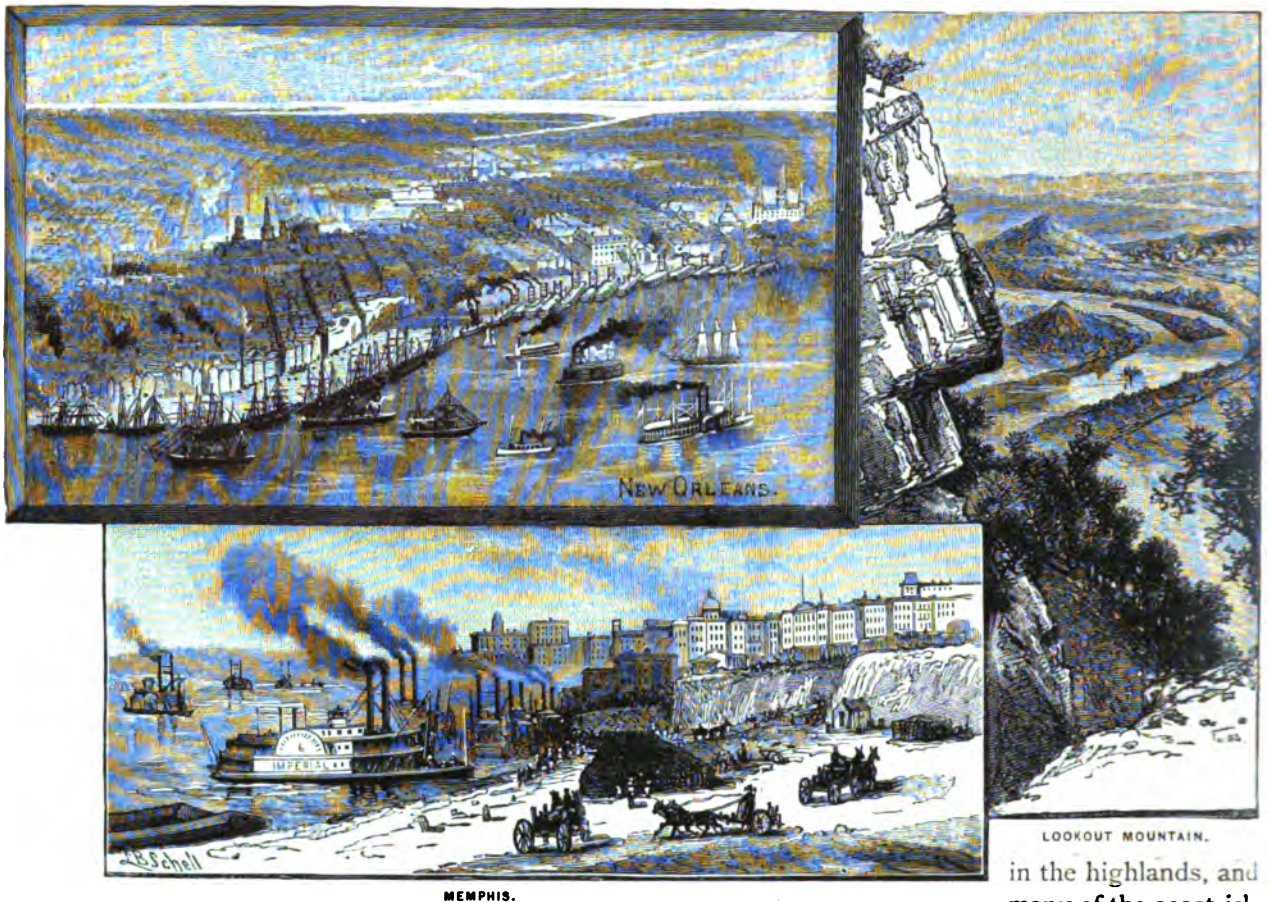
Describe the Tennessee River—the Mobile River—the Savannah River—the St. Johns River. Where is Lake Okeechobee?—Okeefnoke Swamp?

Where is Raleigh?—Newberns?—Columbia?—Charleston?—Atlanta?—Savannah?—Tallahassee?—Key West?—Pensacola?—Montgomery?—Mobile?—Jackson?—Vicksburg?—Nashville?—Chattanooga?—Birmingham?

5. One of the most interesting features of the coast is the chain of long, narrow islands lying near it. These islands, or "spits," have been formed from the mud brought down from the highlands.

6. As fast as the rivers brought down the sediment and dropped it just beyond their mouths, the waves pushed it back. Between the two the mud and sand were piled up, forming the low and narrow islands.

7. There is a chain of islands called



"keys" south of Florida. Unlike the other coast islands, the keys are reefs of limestone that were built by coral polyps.

8. The climate of these states is warm and moist. Except in the highlands, snow is rarely seen. Often the winters along the Gulf coast are nearly as warm as the summers in New England, and the magnolia, palm, wild jessamine, and cypress are always green.

9. The lowlands along the eastern coast yield all the rice grown in the United States. The Gulf coast furnishes most of the sugar. The most valuable crop is cotton, and these states lead the world in its production. The famous sea-island cotton grows on the islands that skirt the coast of Georgia.

10. A little way back of the low swampy coast is a strip of sandy land called the "pine barrens." It is covered with pine trees, and from the sap of these tar, pitch, and turpentine are made. These products are called naval stores.

11. Coal, excellent iron-ore, and gold are found

in the highlands, and many of the coast islands in the Gulf of Mexico contain vast beds of salt.

12. **North Carolina.**—North Carolina has a broken and marshy coast. The islands and sandspits nearly shut in two large lagoons called "sounds." There are few good harbors. The pine barrens of this state produce more naval stores than any other part of the world.

13. *Raleigh*, the capital, is a great cotton market. The oak-trees that grow in the streets are so large that Raleigh is called the "City of Oaks." *Wilmington* and *Newberne* are the only seaports.

14. **South Carolina.**—South Carolina produces more rice than any other state in the Union. In the southern part there is found a kind of marl which is put on the soil to make it rich.

15. *Columbia* is the capital. *Charleston* is the largest city and seaport. Part of the city was destroyed by an earthquake in 1886.

16. **Georgia.**—This is the richest and most populous state in this group. Mines of gold, coal, iron, and marble are found in the mountains. No other

southern state has so many cotton and woolen mills as this state.

17. *Atlanta* is the capital and largest city. More railways centre here than in any other city of these states. *Savannah* is the chief seaport.

18. *Florida*.—Florida is a long, narrow peninsula, skirted in the southern part with coral reefs. The great cypress swamps are called the Everglades.

19. The climate and soil are well suited to the raising of fruits and vegetables. The oranges of Florida are noted for their fine flavor.

20. *Tallahassee* is the capital. *St. Augustine* is one of the oldest towns in the United States. *Key West*, the most southerly city in the Union, is noted for its sponge-fisheries and tobacco trade with Cuba.

21. *Tennessee*.—Tennessee is the only state of this group that has no sea-coast. The eastern part is mountainous; the middle part is hilly, and is noted for its fine horses and cattle.

22. The western section is a level prairie. In this part of the state are nearly all the cotton plantations and tobacco farms. Coal, iron, and marble are mined in the highlands.

23. *Nashville* is the capital and largest city. *Memphis* is a river-port, from which cotton is sent to New Orleans.

24. *Alabama*.—The northern part of this state is mountainous, and contains extensive mines of coal and iron.

25. In the extreme north is the valley of the Tennessee River, noted for its fertile land and beautiful scenery. Farming is the chief employment, and cotton, corn, grain, and fruits are raised.

26. *Montgomery* is the capital. *Mobile* is a large seaport and cotton market. *Birmingham*, near the centre of the state, is noted for its extensive iron manufactures.

27. *Mississippi*.—Mississippi, in proportion to its size and population, yields more cotton than any other state. Along the Mississippi River dikes are built to prevent the overflow of the water.

28. The making of cotton-seed oil is an important industry. Lumber and naval stores are manufactured in the pine barrens in the south.

29. *Jackson* is the capital. *Vicksburg* is the largest city and a great cotton-shipping place.

REVIEW LESSON.

Name the states of this section. Give the capital of each.

In what part of the United States are these states situated?

They occupy the southeastern part.

What is said of the surface of these states?

The greater part is a plain. The Eastern Highlands extend into the northeastern part.

How are the islands which skirt the coast formed?

They are formed by the waves and winds which push back the mud brought down by the rivers.

What is said of the surface of the Atlantic Plain?

The upper part of the Atlantic Plain is high, rolling land. The lower part consists of sandy pine barrens and coast-swamps.

What are the "keys" in the southern part of Florida?

The keys of Florida are coral reefs.

What is said of the climate of these states?

The climate is generally warm and moist.

In what do North Carolina and South Carolina excel?

North Carolina produces more naval stores, and South Carolina more rice, than any other state.

For what is Tennessee noted?

The middle region is noted for its fine horses and cattle. The western part produces cotton and tobacco; the eastern part, coal, iron, and marble.

What are the chief products of Georgia and Alabama?

Coal and iron are mined in the highlands; cotton is produced in the lowlands.

For what is Florida noted?

Florida is noted for its mild, equable climate, its tropical fruits, and its sponge-fisheries.

In what does Mississippi excel?

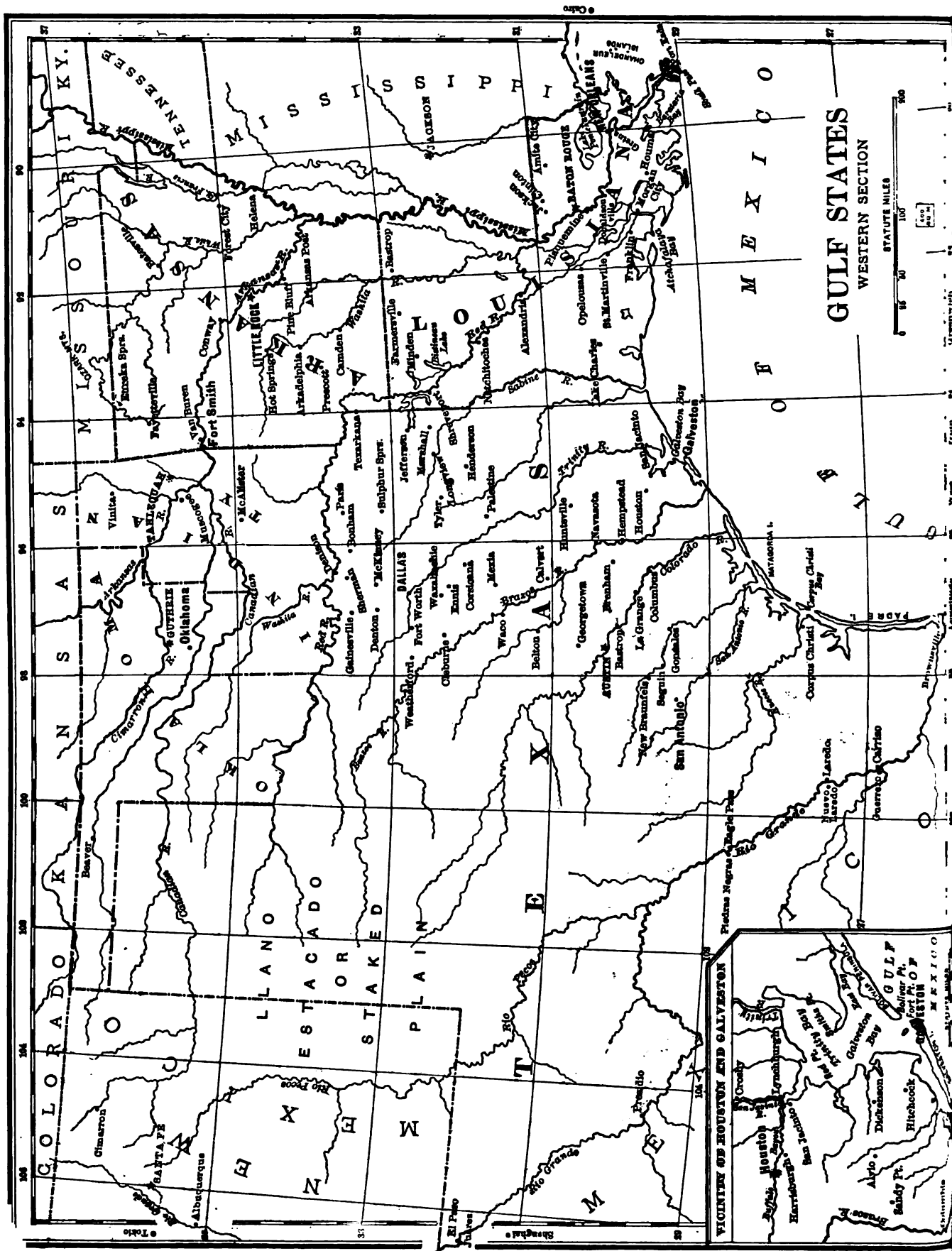
Mississippi, in proportion to its size and population, produces more cotton than any other state.

Name some of the principal cities of the Atlantic Plain.

Wilmington is a market and shipping port for naval stores, Charleston for rice, and Savannah for cotton.

Name the leading cities of the Gulf Slope.

Atlanta is noted for manufactures. Mobile and Vicksburg are cotton markets. Key West is noted for its sponge-fisheries and tobacco-trade.



GULF STATES.

QUESTIONS ON THE MAP.

Name the divisions of this section. Which is the largest? What is the general slope of the land? Which has the higher surface, Indian Territory or Arkansas (*ar'kan-sas*)?

Texas.—What is the northwestern part of Texas called? **Ans.**—*The Pan-Handle*. What two states east?—river and country south?—territory west? What bay indents the southern coast? Name the two largest rivers wholly within the state. What river between Texas and Mexico? What and where is the capital?—the largest city?

1. **Texas.**—The state of Texas is the largest in the Union. The surface is low along the coast, but rises to a central plain. In the northwest it becomes a high plateau.

2. Cotton, corn, and sugar-cane are raised in the river valleys. Great herds of cattle and horses graze on the plains.

3. *Austin* is the capital. *Galveston* is an important seaport and cotton market.

4. **Arkansas.**—The greater part of Arkansas is covered with timber. The northern part of the state yields coal, iron, and lead. Cotton and corn are the leading crops.

5. *Little Rock* is the capital and the largest city. *Eureka Springs* and *Hot Springs* are noted for their mineral waters.

6. **Louisiana.**—The surface of Louisiana is low. Along the Mississippi River much of the land is below the surface of the river, and is protected by banks or levees.

7. Sugar-cane, cotton, and rice are the chief products. Thousands of hogsheads of sugar and molasses are made every season.

Arkansas.—What state north?—states east?—states south?—state and territory west? What river crosses the middle of the state? Where is the highland? What is the capital?—the largest city? What city on the Mississippi?

Louisiana.—What state north?—east?—west?—water south? What river flows into the Mississippi River? What lake in the southeastern part? What and where is the capital?—the largest city?

Indian Territory.—What state north?—states east? What river between Indian Territory and Texas? What river crosses the territory? Name the chief town.

8. *Baton Rouge* is the capital. *New Orleans*, the chief port of these states, is the largest sugar market in the United States.

9. **Indian Territory.**—This territory was set apart by Congress for the use of Indian tribes. Most of the land is rich and fertile.

10. The Indians of some of the tribes are civilized, and have learned to read and write. A newspaper is published in the Choctaw and English languages.

11. *Tablequah*, the capital of the Cherokee Nation, is the largest city.

12. **Oklahoma Territory.**—Oklahoma, formerly part of Indian Territory, was thrown open for settlement in 1889, and organized as a territory in 1890. *Guthrie* is the capital.

REVIEW LESSON.

Name the divisions of this section. Give the capital, the largest city, and the chief river- or seaport of each.

Where are the Gulf States situated?

The Gulf States are in the southern part of the United States and north of the Gulf of Mexico.

Oklahoma Territory.—What states north?—territory east?—state south and west? Chief rivers? Capital?

REVIEW.

Where is Lake Pontchartrain?—Atchafalaya Bay?—Galveston Bay?—Padre Island?—Matagorda Island?

Describe the Arkansas River—the Red River—the Brazos River—the Colorado River—the Rio Grande (*re'o gran'da*)—the Canadian River.

Where is Little Rock?—Helena?—Baton Rouge?—New Orleans?—Austin?—Galveston?—San Antonio?—Tablequah?—Guthrie?

What is said of the size of Texas?

Texas is the largest state in the Union.

In what does Texas excel?

It produces more cattle than any other state in the Union.

In what does Louisiana excel?

Louisiana produces more sugar and molasses than any other state.

What is said of Arkansas?

Grain and cotton are the principal crops. There are famous hot springs in the state.

What is the Indian Territory?

The Indian Territory is a tract of land set apart for the use of Indians.

What is said of the Indians living in this territory?

Some of the tribes are civilized. They live in houses, and have schools and newspapers.

What is said of Oklahoma?

Oklahoma was formerly part of Indian Territory. It became a separate territory in 1890.

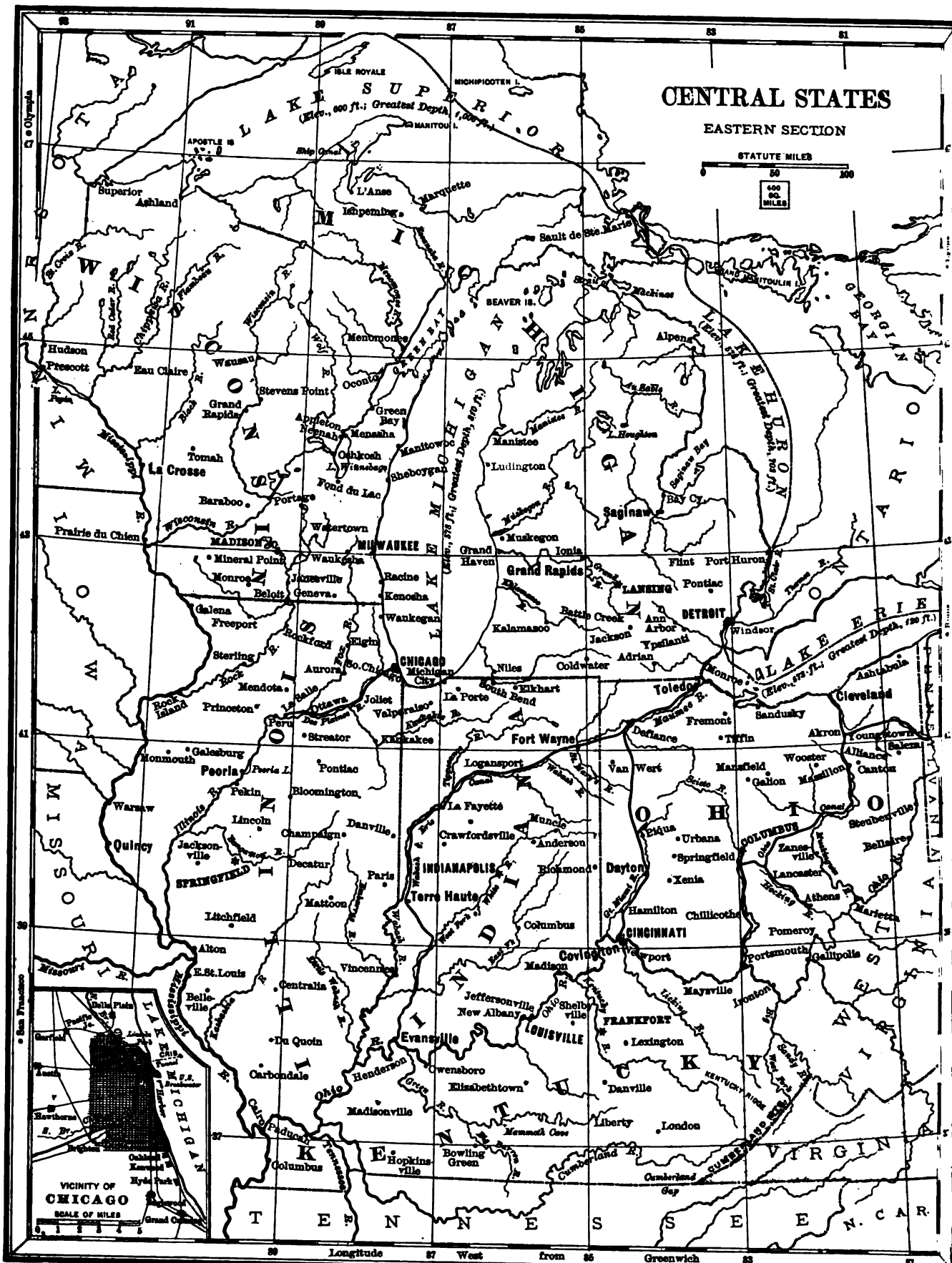
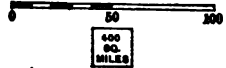
What are the principal cities in this section?

New Orleans and Galveston. The former is the largest cotton and sugar market in the United States.

CENTRAL STATES

EASTERN SECTION

STATUTE MILES



CENTRAL STATES.

EASTERN SECTION.

QUESTIONS ON THE MAP.

Name the states of this section. In what part of the United States are they? Which of them is almost surrounded by water? Which extends farthest north?—south?—east?—west?

Is the surface of these states level or mountainous? What waters north and northeast? Name these lakes. Which of them is the largest? Which is the highest above the sea-level? How does the depth of Lake Erie compare with that of Lake Superior? Which have the same level? What bay indents the eastern coast of Michigan?—of Wisconsin? What strait between upper and lower Michigan? What island northwest of Michigan? Into what water is the northern part of this section drained?—the southern part?

Wisconsin.—What lake and state north?—bay and lake east?—state south?—states west? What lakes in the eastern part? What is the general direction of the rivers? What river begins on the boundary-line between Michigan and Wisconsin? Into what does it flow?

What and where is the capital?—the metropolis?

Michigan.—What can you say of Michigan as to its extent of coast-line? What natural division does each half of the state form? By what lakes is upper Michigan bordered?—lower Michigan? What strait connects Lake Huron with Lake Michigan?

What and where is the capital? What other city on the same river? What lake-port in the southeastern part?

Ohio.—What state and lake north? What states east?—south?—state west? What river with its tributaries drains most of the surface? What river crosses the northwestern part of the state? By what are Lake Erie and the Ohio River connected? *Ans.—They are connected by several canals.*

What and where is the capital?—the largest city? Name two lake-ports.

Indiana.—What state and lake north?—state east?—west? What river between Indiana and Kentucky? What canal connects the Ohio River with Lake Erie?

What and where is the capital?—the largest city? What city on the Ohio River in the southwestern part of the state?

Illinois.—By what states is Illinois surrounded? What river forms the western boundary?—part of the eastern? What is the largest river wholly within this state? In what direction does the land slope?

What and where is the capital?—the largest city? What city on the Illinois River? What town at the junction of the Ohio and Mississippi Rivers?

Kentucky.—What rivers form natural boundaries for Kentucky? Into what do the rivers within the state flow? Where are the highlands of this state? What mountains between Kentucky and Virginia? In what direction does the surface slope? What celebrated cave near Green River?

What and where is the capital?—the largest city? What two cities opposite Cincinnati, O.?

REVIEW.

Name the states of this section—the Great Lakes. Which state forms two peninsulas? Which has the greatest extent of lake-coast? Which has no coast?

Where are the Cumberland Mountains?—Kentucky Ridge? Where is Mammoth Cave?

Where is the Strait of Mackinac (*mak'in a*)?—Saginaw Bay?—Isle Royale?—Green Bay?—Lake Winnebago?

Describe the St. Clair River—the Ohio (*see map of United States*)—the Kentucky—the Wabash—the Illinois—the Wisconsin.

Where is Madison?—Milwaukee?—Lansing?—Detroit?—Columbus?—Cincinnati?—Toledo?—Louisville?—Indianapolis?—Terre Haute (*ter-re hot'*)?—Fort Wayne?—Springfield?—Chicago?—Quincy?

1. All the region which now forms these states once belonged to France, and our first knowledge of it begins with the accounts of the Frenchmen who explored it.

2. In 1541 a Spanish adventurer, De Soto, had discovered the Mississippi River. He was already stricken with death when he first looked upon its waters, and his soldiers sunk his body in the river at the dead of night.

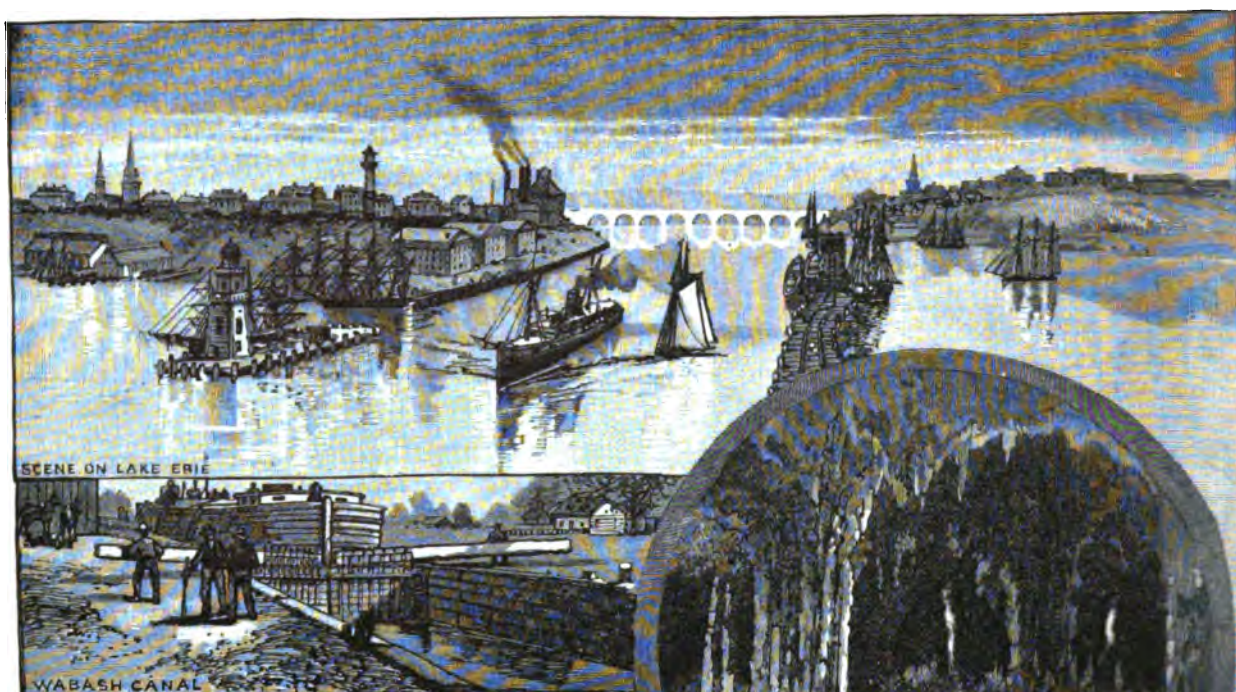
3. For more than one hundred years after De Soto's death no white man traveled through this region. Then Father Marquette (*mar-ket'*), a French

Jesuit missionary, heard of the river from some Indians, and determined to visit it.

4. With a trader named Joliet (*zho-le-a'*) and some Indian guides, he made a journey in a canoe down the Wisconsin River to the Mississippi, and down the Mississippi to the mouth of the Arkansas.

5. A few years later La Salle (*la sa'l'*), a French trader, made his way down the river to the Gulf of Mexico. He named the whole valley Louisiana, in honor of the French king, Louis XIV.

6. The French people had hoped to found a great empire in this valley, but in 1763 all this territory



was given up to the English at the close of a war between the two nations.

7. The states of this group extend from the Eastern almost to the Western Highlands. On this account they are called the Central States. The eastern section of this group includes Michigan, Wisconsin, Ohio, Indiana, Illinois, and Kentucky.

8. These states are sometimes called the prairie states, because of the level plains, which the early French explorers called prairies. In the southeast there are mountains; in the north the surface is very rugged and rocky. There is much timber along the river-bottoms and on the gravelly land.

9. All the land except Michigan and a narrow strip along the Great Lakes is drained by the Mississippi and its tributaries. The divide between the Great Lakes and the Mississippi is only a few feet high.

10. No other part of the world produces so much corn, wheat, and oats as the prairie lands of this section. Besides the great grain farms, there are the largest coal-fields and the richest copper-mines in the world.

11. Most of the people came from the New England and Middle Atlantic States. They are noted for their enterprise.

12. **Michigan.**—Michigan borders four of the

Great Lakes, and has more lake-coast than any other state. It consists of two peninsulas.

13. The upper peninsula yields immense quantities of iron ore, and contains the richest copper-mines in the world. The lower peninsula is very fertile. Farming and sheep-raising are the leading pursuits, and lumber and salt are extensively produced.

14. *Lansing* is the capital. *Detroit* has the best harbor on the lakes.

15. **Wisconsin.**—Wisconsin has a rolling surface, and is dotted with thousands of lakes. All over the state are mounds and earthworks made by a people who lived here before the Indians.

16. There are great forests of pine in the state, and lumber is shipped from Green Bay to all the large cities along the lakes. Grain- and dairy-farming are the chief employments.

17. *Madison* is the capital. *Milwaukee*, the largest city, is an important lake-port.

18. **Ohio.**—Ohio is one of the richest and most thickly peopled states in this group. The soil is wonderfully fertile, and the streams flowing through the valley lands yield an abundant water-power.

19. *Columbus* is the capital. *Cincinnati* is a great trade centre, and the largest city in the valley of the Ohio River. *Cleveland* is noted for its iron and copper smelting furnaces. *Toledo* is a grain market.

20. **Indiana.**—The surface of Indiana consists of broad level prairie lands, covered here and there with timber. In the southeastern part, however, the surface is hilly. Grain is the chief product, and stock-raising is an important industry.

21. *Indianapolis*, the capital, is the largest city in the United States not on navigable water. *Evansville* is an important river-port.

22. **Illinois.**—Except the bluffs along the rivers, the whole state is one vast rolling prairie. It slopes

to the Mississippi River on the west and to the Ohio River on the southeast.

23. Illinois ranks first in the raising of wheat, corn, and oats, and in the amount of land that is cultivated. There are large fields of coal, quarries of building-stone, and mines of lead and zinc.

24. *Springfield* is the capital. *Chicago* is the largest city. It is one of the largest railway centres and grain markets in the world.

25. **Kentucky.**—This is the oldest state west of the Alleghany Mountains. The fertile blue-grass region is famous for fine horses and cattle. Kentucky produces more tobacco than any other state.

26. Much of the surface is underlaid with limestone, in which the water has left wonderful caverns. One of these, Mammoth Cave, is the largest known.

27. *Frankfort* is the capital. *Louisville*, the chief city, is the largest tobacco market in the world.

REVIEW LESSON.

Name the states of this section. Give the capital and principal city of each.

To what nation did this region formerly belong?

All this region formerly belonged to the French people, who had hoped to found a great empire here.

What explorers visited this region?

Father Marquette explored the Mississippi as far as the Arkansas. La Salle explored it to the Gulf of Mexico.

Where are these Central States situated?

The Central States extend from the Eastern Highlands almost to the Rocky Mountains. The eastern section reaches to the Mississippi River.

What is said of the surface of this section?

It is rugged in the north and in the south, but the central part consists of rolling prairies.

What river, with its tributaries, drains these states?

Almost the whole surface is drained by the Mississippi and its tributaries.

What is said of the forests of these states?

The northern part is covered with forests of pine, the river-bottoms with oak, maple, and hickory.

What minerals are found?

The largest coal-fields and the richest copper-mines in the world are in this section. There are also large beds of iron ore.

In what else do these states excel?

They produce more corn, wheat, and oats than any other part of the world.

In what does Michigan excel?

Michigan excels in the production of iron, copper, lumber, and salt.

For what is Wisconsin noted?

Wisconsin is noted for its scenery, and for its forests of pine.

What is said of Ohio?

Ohio is one of the richest and most densely-peopled states of this section.

For what are Illinois and Indiana noted?

Illinois and Indiana produce more wheat than any other states. Illinois is the first state in the production of corn and the value of live-stock.

In what does Kentucky excel?

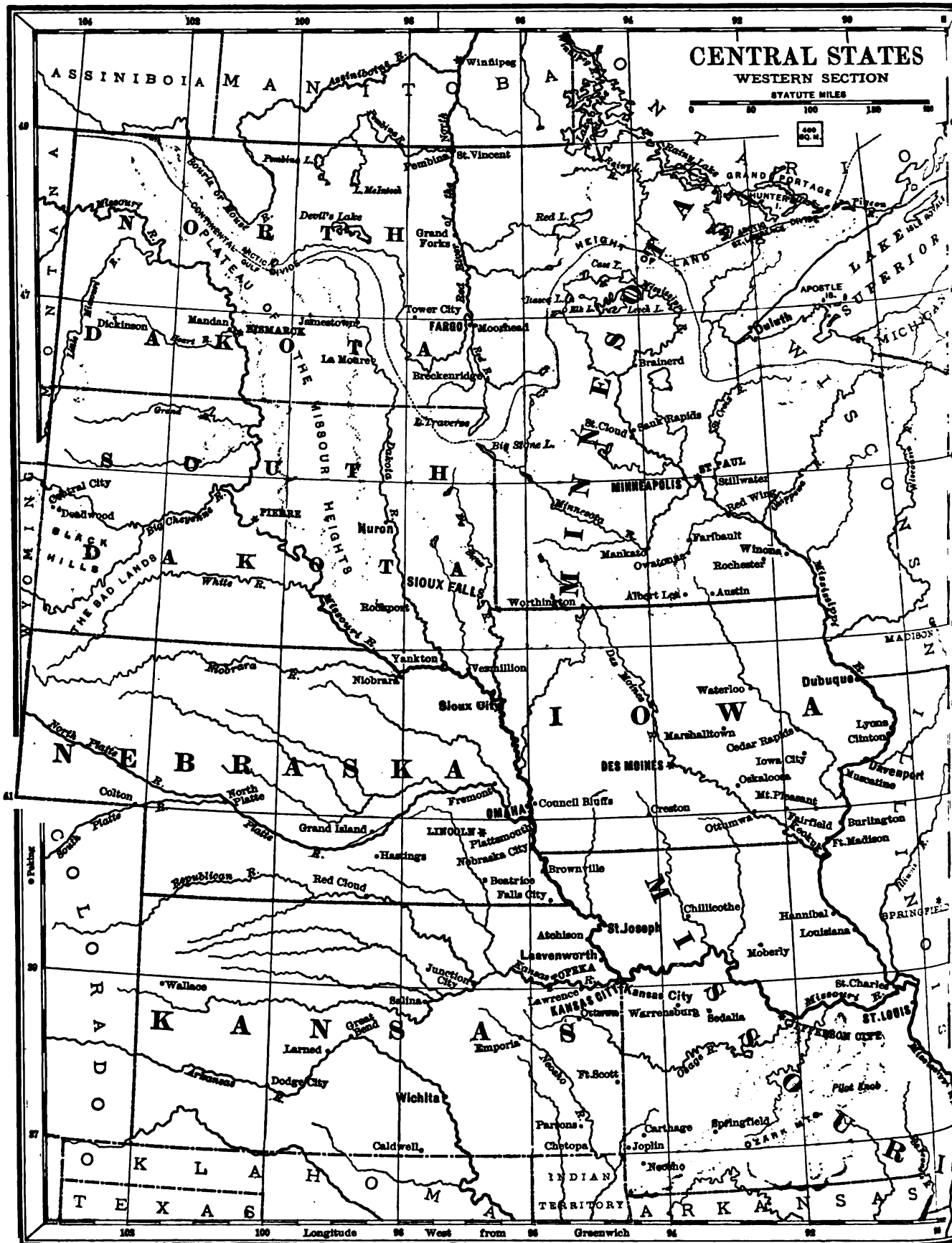
Kentucky produces more tobacco than any other state in the Union.

Name some of the principal cities of these states.

Chicago is the greatest railway centre and grain market in the world. Cincinnati is the metropolis of Ohio, and Louisville of Kentucky.

What cities are important lake-ports?

Chicago, Milwaukee, Detroit, Cleveland, and Toledo are important lake-ports.



CENTRAL STATES.

WESTERN SECTION.

QUESTIONS ON THE MAP.

Between what meridians does this section lie? What parallel forms the northern boundary? In what basins are these states chiefly situated? *Ans.—They are situated chiefly in the Mississippi and Arctic Basins.* How many divisions in this group? Name them.

In what part of these states are lakes the most numerous? In what direction does the Red River of the North flow? What is the general slope of these states?

Missouri.—What state north?—river east?—state south?—states and territory west? What range of mountains crosses the state? What peak in the eastern part? What river flows across the state?

What and where is the capital?—the largest city? Name two cities in the western part on the Missouri River.

Kansas.—What parallel forms the southern boundary? What meridian on the western boundary? What may be said of Kansas as to position? *Ans.—It is nearly in the centre of the United States.* What rivers in this state?

What and where is the capital? Name two river-ports on the Missouri River.

Nebraska.—What state north?—river east?—states south? What parallel of latitude forms its northern boundary? What river crosses Nebraska? What river in the northern part?

What and where is the capital?—the largest city?

Iowa.—What state north?—south? What river west?—east? Where is the highest land? What river flows into the Mississippi?

What and where is the capital and largest city? What city on the Missouri River? What cities on the Mississippi River?

Minnesota.—What is the northern point of this state? What lake and state east?—state south?—states west? Where is the "Height of Land"? What large rivers rise in this state?

What and where is the capital?—the largest city? What city in the southeastern part of the state?

South Dakota.—What state north?—states east?—state south?—states west? What elevations in the southwest?—Name the two boundary rivers—two boundary lakes.

What and where is the capital?—the largest city?

North Dakota.—What provinces north?—state east?—south?—west? What large river crosses the state?—what elevation?—what divide? What lake in the northeast?

What and where is the capital?—the chief city?

REVIEW.

What states border on the Mississippi River?—on the Missouri River? What provinces north?

Where are the Ozark Mountains?—Missouri Heights?—Black Hills?—Bad Lands? Where is the Height of Land?—Pilot Knob?

Where is Lake of the Woods?—Rainy Lake?—Red Lake?—Lake Traverse?—Big Stone Lake?—Devil's Lake?

Describe the Red River of the North—Mississippi River—Missouri River—Des Moines River—Kansas River—Dakota River.

Where is Jefferson City?—St. Louis?—Kansas City?—Topeka?—Leavenworth?—Lincoln?—Omaha?—Des Moines (*da moin'*)?—Council Bluffs?—Dubuque (*doo-bu-ke'*)?—St. Paul?—Minneapolis?—Bismarck?— Fargo?—Yankton?

1. The states of this section extend from the Mississippi River nearly to the Rocky Mountains. They comprise Minnesota, Iowa, Missouri, Kansas, Nebraska, South Dakota, and North Dakota.

2. These states include the great wheat-growing region of the Northwest. In many places the soil is not so fertile as that of the eastern section.

3. In the northeast and southeast the land is rugged and even mountainous. The whole northern part is dotted with lakes and ponds.

4. The central part is a nearly level stretch of land. From the Missouri River it is a gentle slope to the foot of the Rocky Mountains. Even here, it seems more like a level plain than like the summit of a lofty plateau. This region is known as the "Plains."

5. In the southwest the soil is barren. In many places it consists of hills of sand which shift from place to place through the action of the winds upon their loose material.

6. West of the Missouri River there is but little growing timber. In many places, as far as the eye can reach, the only growths are the willows and cottonwoods along the running streams.

7. The climate of these states is much severer than that of the Atlantic States. The summers are hot and moist, and during the hot months destructive whirling storms called tornadoes are common.

8. The winters are very cold. Often for several days the wind sweeps with such fury that the air is filled with drifting snow. These winds are called "blizzards."

9. East of the Missouri River grain-farming is the chief industry. West of the river are the pasture-ranges, where many thousand head of cattle are herded.

10. **Minnesota.**—Minnesota is crossed by the Height of Land. This is the low divide which parts the waters flowing to Hudson Bay from those which enter the Gulf of Mexico.

11. Scattered over its rolling surface are nearly ten thousand lakes and ponds. One of these, a beautiful sheet of water just south of Lake Itasca, is the source of the Mississippi River.

12. Grain-farming is the leading occupation, and the flour made from Minnesota wheat is sent to all parts of the world.

13. *St. Paul* is the capital, and *Minneapolis* the largest city. The former is a railway centre and flour market. The latter contains the largest flour mills in the world. *Winona* is a lumber market.

14. **Iowa.**—Iowa is called one of the prairie states, although it has a rolling surface. The rivers are bordered by high bluffs.

15. Grain- and stock-farming are carried on, and Iowa is one of the leading states in the production of wheat and hay. There are also mines of coal and lead ore.

16. *Des Moines* is the capital and largest city. *Sioux City*, *Davenport*, *Burlington*, and *Dubuque* are important river-ports.

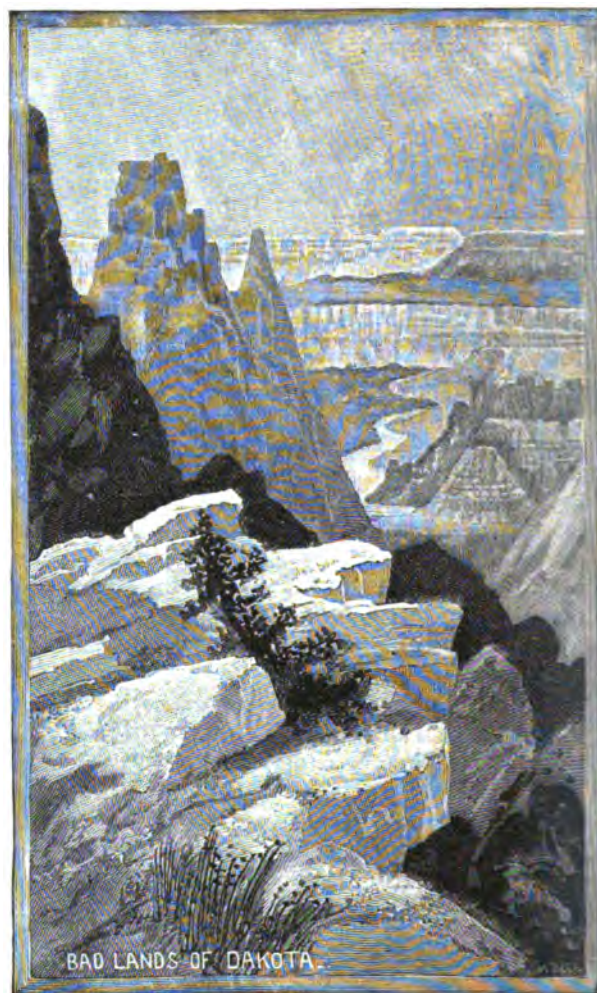
17. **Missouri.**—The Ozark Mountains are the only highlands of this state. The southeastern part is low and swampy. The northern part is much like Iowa in surface and soil. Grain and cattle are the chief products.

18. Iron is very abundant, whole mountains being formed of masses of ore. More lead is produced in Missouri than in any other state. The coal-beds are extensive and easily worked.

19. *Jefferson City* is the capital. *St. Louis*, the largest city of the state, is noted for its beautiful parks and fine buildings. *Kansas City* is an important railway centre.

20. **North Dakota.**—The surface of North Dakota consists chiefly of high, rolling prairie-land nearly destitute of trees. The soil is very fertile, especially in the Red River Valley.

21. The greater part of the state is drained by the Missouri River, whose waters flow into the Mississippi River and thence into the Gulf of Mexico. The Red River of the North, whose waters finally reach Hudson Bay, drains the northeastern section.



22. Farming and stock-raising are the leading pursuits. Wheat of the finest quality is extensively grown in the eastern part. The western section is better adapted to grazing.

23. *Bismarck* is the capital. *Fargo*, *Grand Forks*, and *Jamestown* are thriving cities.

24. **South Dakota.**—The surface of South Dakota is similar to that of North Dakota. In the southwest are the elevations known as the Black Hills. East of these are the famous "Bad Lands,"

which are broken lands whose surface has been carved and sculptured by running water.

25. South Dakota is one of the great agricultural states of the Mississippi Valley. The "Bad Lands" in many places afford excellent pasturage for cattle and sheep. The Black Hills are rich in minerals. Nearly all the state is drained by the Missouri River.

26. *Pierre* is the capital. *Sioux Falls* has immense water-power. *Yankton* is an important trade centre. *Deadwood*, in the Black Hills, is a mining centre.

27. **Nebraska.**—The eastern part of Nebraska is generally level and fertile. In this part of the state there are also many small inland lakes. The north-western part consists of beds of clay, broken and seamed by water. It is much like the "Bad Lands" of South Dakota.

28. Grain-farming is the chief employment in the

eastern part, and cattle-raising in the western where wild grass is abundant.

29. *Lincoln* is the capital. *Omaha*, the largest city, has an extensive railway and river commerce. It is one of the chief railway centres of the United States.

30. **Kansas.**—Kansas is nearly in the centre of the United States, and is one of the largest and richest of the Central States. Like the other states of this section, Kansas is covered with a network of railways which carry its crops of wheat and corn to the markets.

31. Grain is the chief crop. Mines of coal and lead are in the eastern part. Many sheep are raised in the western section.

32. *Topeka* is the capital. *Kansas City*, *Wichita*, *Leavenworth*, and *Atchison* are important towns.

REVIEW LESSON.

Name the divisions of this group. Give the capital and the largest city.

Where is the western section of the Central States situated?

The western section of the Central States extends from the Mississippi River nearly to the base of the Rocky Mountains.

What is said of the surface of this region?

The Plains of the central part consist of a nearly level plain which slopes to the summit of the Rocky Mountains. The northern part is mountainous.

What are the Bad Lands?

The Bad Lands are mountains which have been shaped by the action of running water.

What is said of the drainage of these states?

They are drained chiefly by the Mississippi and Missouri Rivers. The northern part is drained by the Red River of the North.

What is said of the climate?

The climate is severe. The summers are warm and the winters very cold. Destructive whirlwinds and furious snow-storms are common.

What is said of the lakes of the northern part?

There are many thousand lakes in the northern part. A small lake south of Lake Itasca, in Minnesota, is the source of the Mississippi River.

What are the principal occupations of the people?

Grain-farming in the eastern part, and cattle-raising in the western, are the chief industries.

What minerals are found?

There are extensive fields of soft coal. Lead is abundant. Gold occurs in the Black Hills.

For what is Minnesota noted?

Minnesota is noted for its beautiful scenery, its grain farms, and its forests of pine.

What is said of North Dakota and South Dakota?

Much of their surface consists of high prairie lands, well adapted to grazing or wheat-growing. Gold is found in the Black Hills.

What is said of Nebraska and Kansas?

Nebraska and Kansas are chiefly prairie states. There are extensive cattle-ranges in the western part.

In what do Iowa and Missouri excel?

Iowa and Missouri rank among the first grain-producing states in the Union. They also contain productive lead-mines.

Mention the principal commercial centres of these states.

St. Louis is the largest city in the basin of the Mississippi River. St. Paul, Omaha, and Kansas City are great railway centres.

For what is Minneapolis noted?

Minneapolis contains the largest flour-mills in the world.



ROCKY MOUNTAIN AND PACIFIC STATES AND TERRITORIES.

QUESTIONS ON THE MAP.

Where are these states and territories? What parallel forms their northern boundary?—part of their southern boundary? What country north?—ocean west?—country south?

In what highland region is this group situated? What is the general direction of the mountain-ranges? What is the most western range?—the most eastern? What range between? Where is the inland basin region? In what part are lakes most numerous? What are the principal rivers of this region? What river has no outlet?

Washington.—What country north of Washington?—state east?—south?—ocean west? What strait between Vancouver Island and Washington? What river drains most of the surface? What sound in the northwestern part? What and where is the capital?—the largest city?—What seaport south of Seattle?

Oregon.—What state north?—state east?—states south?—ocean west? What mountains in the northeastern part? What cape projects from the coast? What lakes in the Sage Plain? What river drains most of the valley between the Cascade and Coast Ranges? What and where is the capital?—the largest city?—What town near the mouth of the Columbia River?

Idaho.—What mountains on the northeastern border of Idaho? What two states east?—state and territory south?—states west? What lake in the north? What river between Oregon and Idaho? What and where is the capital?

Montana.—What state southwest?—south?—two states east? What large river, with its branches, drains most of Montana? Where are the mountains in this state? What lake in the northwestern part? What and where is the capital?—the largest city?

Wyoming.—What state north?—states east?—state and territory south?—states and territory west? What mountains cross this state? What hills in the northeastern part? In what directions do the rivers flow? Where, then, is the watershed? What park and lake in the northwestern part? What and where is the capital and largest city? What city west of the capital?

California.—What state north? What state and territory east? What country south?—ocean west? In what part of the state are the deserts? What capes on the western coast? What bay indents the western coast? What islands southwest? What ranges of mountains in this state? What rivers drain the valley between the Sierra Nevada and Coast Ranges? Name the largest lake. What and where is the capital?—the largest city and chief seaport? What city in the southwestern part?

Nevada.—By what states and territories is Nevada surrounded? What river between Nevada and Arizona? What lake between Nevada and California? For what are the lakes and most of the rivers remarkable? *Ans.*—*They have no outlet to the sea.* What and where is the capital?—the largest city?

Colorado.—By what states and territories is Colorado surrounded? What mountains cross the state? What peaks in the southern part?—in the centre? What is the highest peak in Colorado? *Ans.*—*Sierra Blanca, 14,464 feet high.* What and where is the capital? What city southwest of the capital?

Utah Territory.—What states and territory surround Utah? What mountains in the centre of Utah? What lake in the northwestern part?—lake south of it? For what is Great Salt Lake noted? *Ans.*—*It is the largest salt lake in the western continent.* What and where is the capital? What city north of Salt Lake City?

Arizona Territory.—What territory north of Arizona?—east? What country south? What states west? What river drains the northern part?—the southern part? What plateau in the northwestern part? What and where is the capital? What city in the southern part?

New Mexico Territory.—What state north?—east?—state and country south?—territory west? What mountains cross this territory? What river, with its tributaries, drains the western part?—the central and eastern part? What and where is the capital and largest city? What city southwest of Santa Fé?

REVIEW.

Name the states and territories of this section.

Where are the Rocky Mountains?—Cascade Range?—Sierra Nevada?—Coast Range?—Bitter Root Mountains?—Big Horn Mountains?—Wasatch Mountains?—Blue Mountains?

Where is Puget Sound?—Yellowstone Lake?—Great Salt Lake?—Humboldt Lake?—Tulare Lake?—Klamath Lake?

Describe the Columbia River—the Missouri (*see Map of United States*)—the Colorado—the Humboldt—the Sacramento—the Snake.

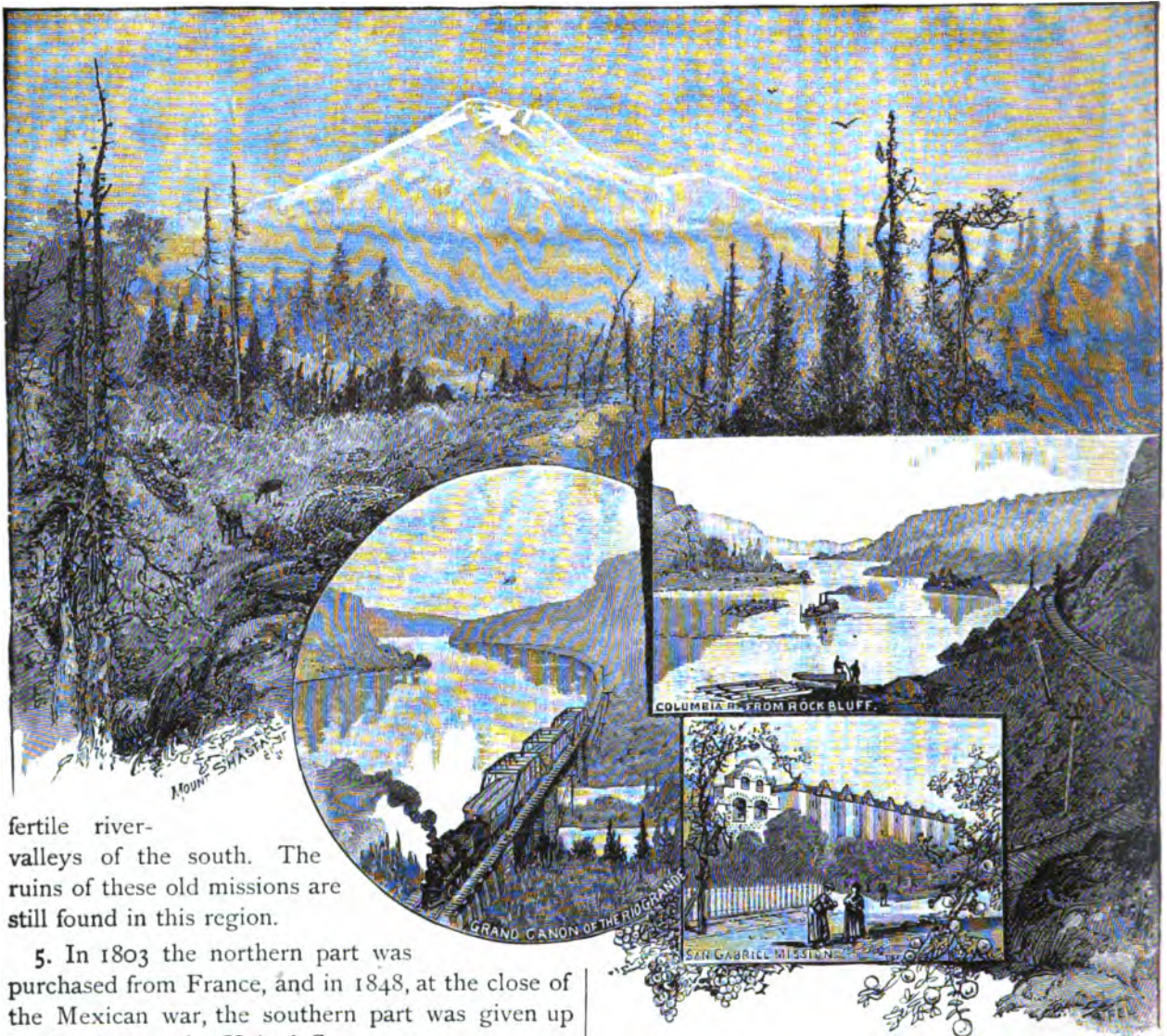
Where is Butte (*bûte*) City?—Cheyenne (*shî-ên'*)?—Denver?—Leadville?—Santa Fé?—Albuquerque (*âl'boo-ker-kâ*)?—Prescott?—Tucson?—Salt Lake City?—Ogden?—Boisé (*boi'sâ*)?—Olympia?—Seattle?—Portland?—Carson City?—Virginia City?—Sacramento?—San Francisco?—Los Angeles (*lôs ân-g'ha-lîs*).

1. None of the land included in this section belonged to the United States before the War of the Revolution. The northern part belonged to France; the southern part to Spain.

2. As early as 1513, Balboa had discovered the Pacific Ocean, and many Spanish explorers visited this region during the fifty years following.

3. One of them, Cortez (*kor'tes*), the conqueror of Mexico, discovered and explored the peninsula of Lower California, and anchored in San Francisco Bay. Another, De Espejo (*dâ es-pâ'ho*), visited the locality of the present city of Santa Fé, New Mexico.

4. During these years Franciscan priests established missions along the coast and throughout the



fertile river-valleys of the south. The ruins of these old missions are still found in this region.

5. In 1803 the northern part was purchased from France, and in 1848, at the close of the Mexican war, the southern part was given up by Mexico to the United States.

6. In 1847 gold was discovered. This was the beginning of a tide of immigration which spread to all parts of the Western Highlands. Besides the territory of Alaska, there are in this section three territories and eight states. They comprise more than one-third of the area of the United States.

7. This group covers the entire Western Highlands of the United States and reaches a little way into the basin of the Mississippi River. It embraces the widest part of the Rocky Mountain System.

8. The highest ranges of this system are the Rocky Mountains on the east and the Cascade Mountains and the Sierra Nevada on the west. All of them are lofty ranges. In few places only are their summits less than 8000 feet above the sea.

9. These high ranges enclose a plateau called the Great Basin. It is called a basin because the mountains that shut it in form a rim five or six thousand feet higher than the land they enclose.

10. The northern part of the Great Basin is covered with an immense sheet of lava. The Columbia and Sacramento Rivers and some of their branches have cut channels through the lava, in places more than 2000 feet deep.

11. The southern part is a high sandstone plateau, and is drained by the Colorado River. It is sometimes called the cañon- or alcove-land.

12. All the streams flow in deep, narrow cañons with almost vertical sides. Some of these cañons

are more than a mile deep, and they have been made by the rivers themselves.

13. The western part of the Great Basin has no outlet to the sea, and is therefore a true basin. The streams either flow into lakes or sinks, or else their waters dry up in the midst of the desert.

14. Some of the lakes are salt and some are fresh. They are the remnants of two lakes which once covered the greater part of the true basin. Lake Tahoe is noted for its beautiful scenery.

15. Great Salt Lake is the largest salt lake in the Western Continent. It is now only a little larger than the state of Rhode Island, but many years ago it was half the size of the New England States. All along the mountain-side one may see the old shore-lines of this lake.

16. West of the Cascade Mountains and the Sierra Nevada is the Pacific Slope. Look at the map and you will notice a chain of broad valleys reaching from Mexico to Canada. These valleys are among the richest in the world.

17. The level lands are covered with fields of grain, with orange-groves, and with vineyards. The foot-hills are full of gold and quicksilver, and the mountain-sides are covered with timber.

18. The Western Highlands is the mineral region of the United States. It produces more gold and silver than any other part of the world.

19. The climate of the Great Basin is not severe, but the whole region is almost barren because of the lack of rain. The climate of the Pacific Slope is very mild. The summers are cool and dry; the winters warm and rainy.

20. **Washington.**—The Cascade Mountains divide Washington into two parts, and the Coast Range extends in irregular clusters along the coast.

21. The eastern part of the state is adapted to grazing and farming. The western part is noted for its forests of fir, which yield the best masts and ship-spars in the world.

22. Puget Sound has the largest lumber-mills in the world. On the Columbia River are extensive salmon-fisheries.

23. *Olympia* is the capital. *Seattle* and *Tacoma* are the largest cities and centres of trade.

24. **Oregon.**—Western Oregon contains the fertile valley of the Willamette (*wil-lam'et*) River. Most of the cities and towns are in this part of the state. The mountain-slopes are covered with forests of fir.

25. The middle and eastern parts are excellent grazing lands. Wheat and wool are the products of the western part, and cattle of the middle and eastern sections.

26. *Salem* is the capital. *Portland* is the metropolis of Oregon and Idaho.

27. **Idaho.**—There is much highland in Idaho. The southern part is a sage-brush plain, but the river-valleys yield large crops of grain. Gold and silver mining is the leading pursuit.

28. *Boisé* is the capital. *Silver City* is the centre of the mining district.

29. **Montana.**—The western part of Montana is in the high ranges of the Rocky Mountains. The eastern portion consists of plains and rolling hills, covered with bunch-grass.

30. Mining is the chief occupation of the western, and cattle-raising of the eastern part. Some of the largest cattle ranches in the United States are in this state.

31. *Helena*, the capital and largest city, is in the centre of a rich mining district. *Butte City* is also a mining centre.

32. **Wyoming.**—Cattle-raising and mining are also the chief industries in Wyoming. Gold and silver are found in the Black Hills, and coal in the southwestern part.

33. Yellowstone National Park, in the northwestern part, is noted for its wonderful scenery. It contains more than 9000 geysers and hot springs.

34. *Cheyenne*, the capital, is a great cattle market.

35. **California.**—California is three times as large as the New England States.⁶ Between the Sierra Nevada and Coast Ranges is the great grain-producing valley.

36. The mountain-slopes are covered with forests, and the red-wood trees sometimes grow to a height of 350 feet.

37. The highlands are noted for gold, the Coast Range for quicksilver, and in the production of these metals California is the foremost state.

38. Southern California has a warm and delightful climate. Grapes, oranges, raisins, wine, and wool are the chief products of this part of the state.

39. *Sacramento* is the capital. *San Francisco* is the largest city, and is noted for its fine harbor. *Los Angeles* is the metropolis of Southern California.

40. **Nevada.**—The greater part of Nevada is almost wholly in the Great Basin. The southeastern part of the state is drained by streams that belong to the Colorado River Basin. Gold is mined, but silver is the chief product.

41. Farming is carried on in the river-valleys, but because of the lack of rain the lands must be watered to produce crops. Barley is the chief crop.

42. *Carson City* is the capital. *Virginia City* is near the Comstock mines, which have produced more silver than any others in the world.

43. **Colorado.**—Colorado is noted for its healthful climate. The highest peaks of the Rocky Mountains are in the central part of this state.

44. More silver now comes from Colorado than from any other three states, and more gold than from any other state except California. Iron and coal are found in large quantities.



48. **Arizona Territory.**—Arizona has a hotter climate than any other part of the United States.

49. In the northern part are the famous cañons where the Colorado River flows at a depth varying from 1000 to nearly 7000 feet below the surface. Ruins of old pueblos are found in all parts of the territory.

50. There are rich mines of gold, silver, copper, and lead in this territory. Farming is carried on along the Gila (*he'lā*) River and its branches.

51. *Phoenix* is the capital. *Tucson* (*too-sōn'*) is the largest city.

52. **New Mexico Territory.**—New Mexico is one of the most fertile divisions of this group, and was one of the first settled by the Spanish explorers. Cattle- and sheep-raising are the chief employments. Fruit is grown in the river-valleys.

53. The Zuñi (*soon'ye*) Indians are the descend-

45. *Denver* is the capital and largest city. *Leadville* is 10,000 feet above the sea-level.

46. **Utah Territory.**—The western part of Utah is a desert region, yielding little else than sage-brush. The eastern part is fertile where the land is watered. Crops of wheat, barley, and fruit are raised.

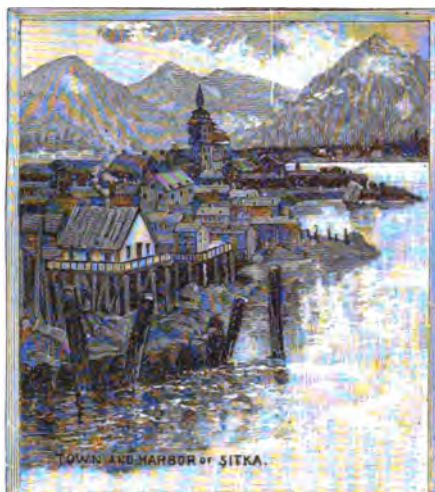
47. *Salt Lake City* is the capital and largest city. *Ogden* is a railway centre.

ants of a people who lived here before the Spanish conquest.

54. *Santa Fé* is the capital. *Albuquerque* is the centre of the farming region.

55. *Alaska*.—Alaska is the largest territory in the United States. It was purchased of the Russian government in 1867.

56. A large part of Alaska lies in the north frigid zone. The Yukon River is one of the largest in the world. Mount St. Elias is one of the highest mountains in North America. Many of the Islands of the Aleutian group are active volcanoes.



57. All the settlements except a few Esquimaux villages are in the narrow strip of land along the Pacific Ocean. Here the climate is mild, but east of the Coast Range it is very cold.

58. Gold and silver are abundant. Nearly all the seal-skin furs come from the Pribiloff Islands. The waters of Bering Sea are now the chief whale-fisheries. Salmon are plentiful in the rivers.

59. *Sitka*, the capital, is one of the oldest towns on the Pacific coast of North America.

Juneau (jū-nō') is the largest town.

REVIEW LESSON.

Name the states and the territories of this group. Give the capital and largest city of each.

In what part of the United States are these states and territories?

These states and territories cover the entire Western Highlands of the United States. They embrace the widest part of the Rocky Mountain System.

What is said of the surface?

The whole region is traversed with mountain-ranges. The Sierra Nevada and the Rocky Mountains enclose the Great Basin.

What is said of the lakes of the Great Basin?

Most of the lakes of this region are salt. Great Salt Lake is the largest salt lake in the Western Continent.

What is said of the Colorado River?

The Colorado River and its tributaries flow in deep cañons with vertical walls. In some places the cañons are more than a mile deep.

What is said of the valleys between the Coast Range and the Sierra Nevada and the Cascade Mountains?

The valleys between these ranges are the most productive and densely-peopled part of these states and territories.

What is said of the climate of this region?

The climate is milder than on the Atlantic Plain. But little rain falls in the Great Basin. On the Pacific coast there is a rainy winter and a dry summer.

For what are the states and territories noted?

They produce more gold and silver than any other region in the world.

What do Oregon and Washington produce?

Oregon and Washington produce grain, cattle, and lumber.

For what are Montana, Wyoming, and Idaho noted?

Montana, Wyoming, and Idaho yield gold and silver. They contain large cattle-ranches.

In what does California excel?

California is one of the foremost states in the production of gold, wool, wheat, and wine. Its mines of quicksilver are among the richest in the world.

What is said of Colorado?

Colorado produces more precious metals than any other state. It contains some of the highest peaks of the Rocky Mountains.

For what are Arizona, Utah, and Nevada noted?

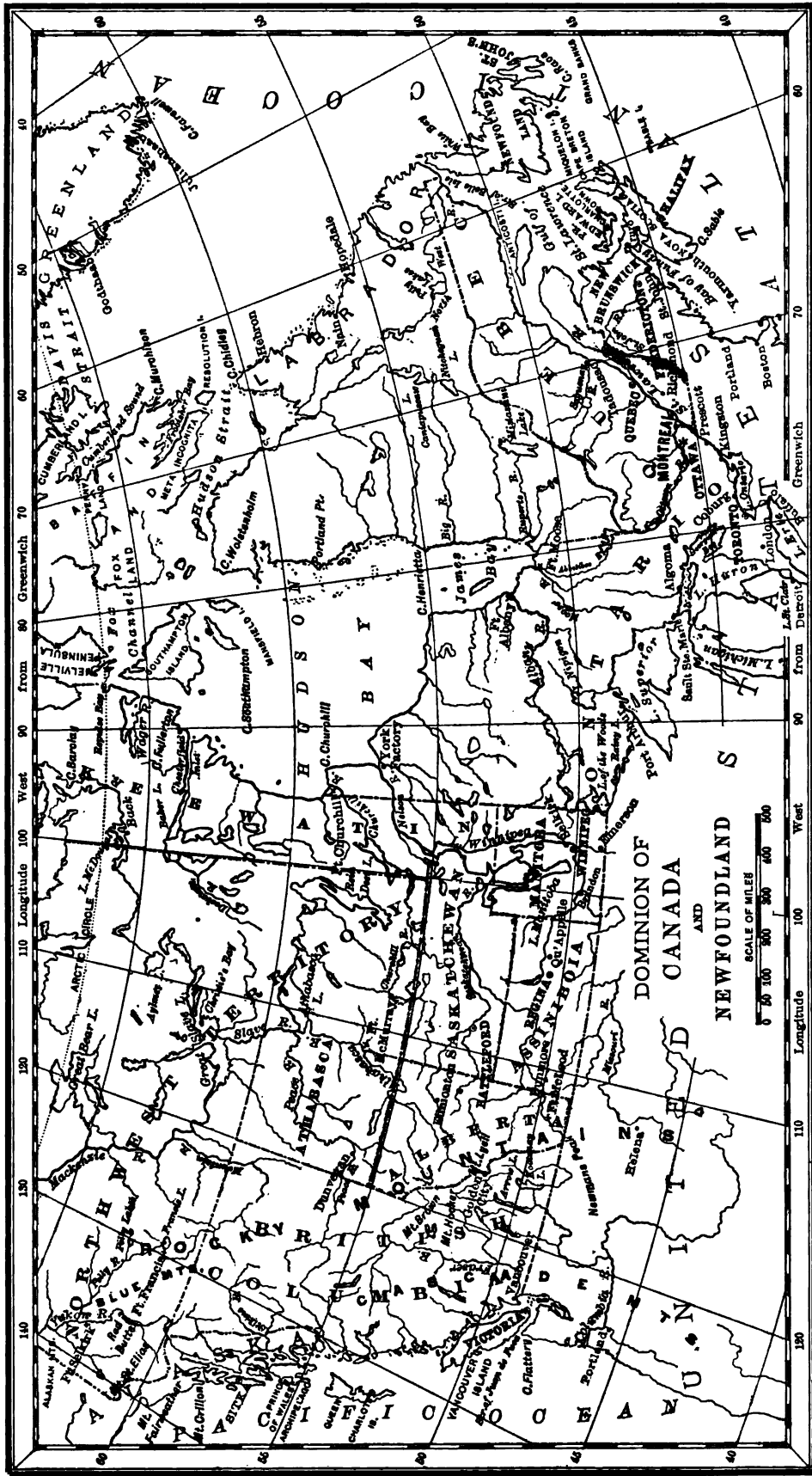
Arizona, Utah, and Nevada lie chiefly in the Great Basin. They contain rich silver-mines.

What is said of New Mexico?

Santa Fé, the capital of New Mexico, is one of the oldest towns in the United States.

Name the principal cities of these states.

San Francisco is the chief seaport and largest city of the Pacific coast. Denver, Portland, and Los Angeles are important commercial centres.



QUESTIONS ON THE MAP.

What are the Dominion of Canada and Newfoundland together called? *Ans.*—They are called *British America*.
 What water north? (*See map of North America*.) What water east?—west? What country south? What is the extent of Canada from east to west? (*Measure along the 49th parallel*.) In what zones is it situated?
 What is the group of islands in the northern part called? What large bay indents the northeastern part? What strait connects it with the Atlantic Ocean? What gulf in the southeastern part? What group of lakes between Canada and the United States? Name the four largest lakes wholly

in Canada. What river drains the Great Lakes? Of what lakes is Mackenzie River the outlet?—Nelson River? What are the head-waters of Mackenzie River called?—of Nelson River? What large island east of the mainland? What two islands off the western coast? What peninsula projects from the southeastern part? What mountains in the western part?

Which of the divisions of the Dominion of Canada are provinces? *Ans.*—*Nova Scotia, New Brunswick, Prince Edward Island, Quebec, Ontario, Manitoba, and British Columbia*. What district is attached to Newfoundland? *Ans.*—*The District of Labrador*.

What is the capital of the Dominion of Canada?—of New-

foundland? What two cities on the St. Lawrence River?—one on Lake Ontario? What is the principal seaport? *Ans.*—*Quebec*. What seaport in Nova Scotia?—on Vancouver Island?

REVIEW.

Where is Hudson Bay?—Baffin Bay?—Hudson Strait?—Gulf of St. Lawrence?—Davis Strait?—Where is Newfoundland?—Vancouver Island?—Arctic Archipelago?—Prince Edward Island?—Nova Scotia?—Southampton Island?—Cape Chidley?—Cape Race?—Cape Sable?—Describe the St. Lawrence River—Mackenzie River—Nelson River.

Where is Ottawa?—Montreal?—Quebec?—Victoria?—Vancouver?—Toronto?—St. John?—St. Johns?—Halifax?

BRITISH AMERICA.

1. The British possessions in North America comprise most of the land north of the United States. Just after the voyage of Columbus, an English explorer, Cabot, claimed this region for England.

2. The English did not occupy the country, however, and a few years afterward the French made settlements along the St. Lawrence River and the Great Lakes. They held the country for more than two hundred years. At the close of the French and Indian war it was given up to the English.

3. The Dominion of Canada embraces all of British America except the island of Newfoundland and Labrador. It consists of seven provinces, together with several districts and territories.

4. Except in the western part the surface is a rolling plain. The Rocky Mountains cross the western part, and a few ranges of the Appalachian System extend along the eastern side.

5. There are many large rivers in Canada, but because many of them flow through a constantly-frozen country they are of but little use to mankind. Nearly every one consists of a chain of lakes and ponds. More than half the lakes in the world are in this country.

6. The St. Lawrence River is one of the main highways of trade in North America. From the ports along the river and the shores of the Great Lakes, vessels go to all parts of the world.

7. The climate is very severe. The summers are short, and the long winters are extremely cold. Even in the southern part the snow sometimes remains on the ground for six months.

8. In the eastern provinces the people are employed chiefly in farming and lumbering. All along the coast they are engaged in the cod-fisheries. On the Pacific coast there are rich mines of coal and gold.

9. Most of the Canadians are of English descent, but those of the province of Quebec are descended from the early French settlers, and speak the French language.

10. *Ottawa*, in the province of Ontario, is the capital of the Dominion of Canada. *Montreal*, in the province of Quebec, is the metropolis. Ocean

steamers ascend the river and land their cargoes at its docks.

11. *Quebec*, the capital of the province of Quebec, has a French population. It is famous for its fortress and citadel. *Toronto* is the chief city on the lakes.

12. *Newfoundland* includes also the district of Labrador. The eastern coast is cold and foggy. In the interior the winters are mild and the summers cool.

13. In the short summer more than fifty thousand people gather along the coast to catch and cure the fish caught during the season. *St. John's* is the capital.

REVIEW LESSON.

By whom was this territory first occupied?

This territory was first occupied by the French. It was given up to the English at the close of the French and Indian war.

What is said of the surface?

The western part is crossed by the Rocky Mountains. More than half the fresh lakes in the world are in this country.

What is said of the rivers?

Most of the rivers flow through a constantly-frozen region. The St. Lawrence is the main highway of trade and foreign commerce.

What does the Dominion of Canada comprise?

The Dominion of Canada comprises all of British America except the province of Newfoundland.

What is said of the climate?

The winters are long and severely cold; the summers are short.

What are the chief occupations?

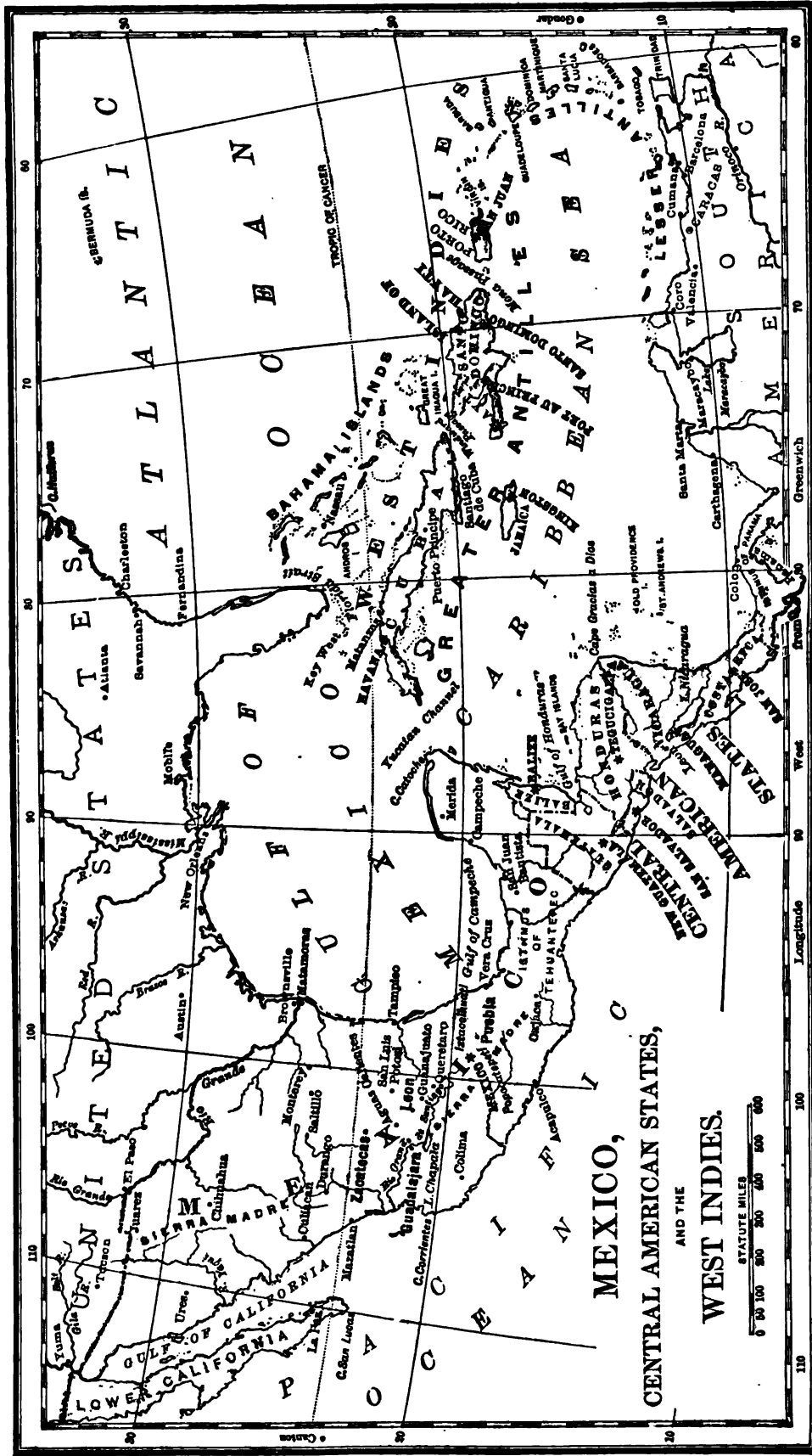
Fishing and lumbering are the chief employments in the eastern part; farming in the central part; and mining in the Western Highlands.

What is said of Newfoundland?

The province of Newfoundland includes the district of Labrador. The cod-fisheries are the chief source of wealth.

Name the principal cities of the Dominion of Canada.

Ottawa is the capital, and *Montreal* the largest city. *Quebec* is noted for its fortress. *Toronto* is the chief lake-port.



QUESTIONS ON THE MAP.

In what part of North America are Mexico and the Central American States? What mountains traverse these countries? To what system do they belong? *Ans.*—To the Rocky Mountain System. Of what do the West Indies consist? *Ans.*—They are the crests of a mountain-chain partly covered by the sea. What islands north of the West Indies? Of what do they consist? *Ans.*—They are low coral reefs.

Mexico.—What ocean southwest of Mexico? What gulf northeast? What river between Mexico and the United States? What gulf west? What peninsula in the western part? What cape at its extremity? What channel between Mexico and Cuba? What Isthmus in the southern part?

What is the capital of Mexico? What seaport near Mexico on the Gulf of Campeche?—southwest of the city of Mexico on the Pacific coast?

Central American States.—What sea northeast? What ocean southwest? What gulf in the northeastern part? What large lake in these states? Which is the northern state?—the southern? Name the capital of each state.

West Indies.—What three groups compose the West Indies? Name the four largest islands of the Greater Antilles (*Antilles*). What strait between Cuba and Florida?—between Cuba and Hayti? What is the capital of Cuba?—of Hayti? of Santo Domingo?—of Jamaica? What town on one of the Bahama Islands?

REVIEW.

Where is the peninsula of Lower California?—Isthmus of Tehuantepec (*ta-vee'-ta-peh*)? Where is the Sierra Madre?—the volcano of Popocatepetl (*po-po'-ka-ta-petl*)?—Iztaccihuatl (*is-tah'-se-huatl*)? Where is Cuba?—Hayti?—Jamaica?—Puerto Rico (*re'-ko*)?—Trinidad?—Barbadoes? Where is the Caribbean Sea?—Gulf of Campeche (*kam-pe'-che*)?—Lake Nicaragua (*ne-ka'-ra-vee'-gra*)?—Gulf of Honduras?—Florida Strait?—Yucatan Channel?—Windward Passage?—Mona Passage? Where is Mexico?—Paso del Norte (*no'-re*)?—Havana?—Santo Domingo?—Kingston?—Salvador?—New Guatemala (*new-gwa-ta-ma-las*)?—Vera Cruz?—Honduras (*hon-du-ras*)?



City of Mexico—Twin Volcanoes in the Distance.

MEXICO, THE CENTRAL AMERICAN STATES, AND THE WEST INDIES.

MEXICO.

1. A few years after the voyage of Columbus, a brave but cruel Spaniard named Cortez, with a company of soldiers, sailed across the Gulf of Mexico and landed at a place near where the city of Vera Cruz now stands.

2. The half-naked savages whom they found on the coast told the soldiers of a great city on the other side of the mountains, and Cortez determined to go in search of it.

3. The people who lived there were the Aztecs. They dwelt in well-built houses, and knew how to cultivate the soil and how to weave and spin. They wore garments of cloth and ornaments of gold and silver.

4. After some hard fighting, Cortez reached the Aztec capital, which is now called Mexico. He made the king a prisoner, and afterwards caused him to be murdered by his own people.

5. As soon as he had done this, Cortez made the entire country a province of Spain. It remained a

Spanish colony until 1822, when the Mexicans declared themselves independent.

6. The Spaniards married among the people. The natives learned the Spanish tongue, and their own language and customs were soon forgotten.

7. They also took up many of the customs of their European conquerors, so that now there is but little in which the Mexican people of to-day resemble those who occupied the country three hundred and fifty years ago.

8. Mexico extends from the United States on the north to the Central American States on the south-east. Next to the United States it is the wealthiest and most populous country of North America.

9. The surface is broken by the Sierra Madre; but the greater part is a vast table-land more than a mile high. From the foot of the mountains to the sea is a belt of low and marshy land.

10. In the south a chain of volcanoes reaches almost across the country. Two of these, Iztaccihuatl and Popocatepetl, are called twin volcanoes.

11. In the lowland regions the climate is hot and unhealthy, but on the high table-land it is cool and delightful. There are two seasons, a rainy and a dry one.

12. Many of the lakes, like those of the Great Basin, have no outlets. During the rainy season the waters collect in the depressions and become salt marshes or sinks.

13. Most of the rivers are mountain-torrents rushing from terrace to terrace towards the sea. The Rio Grande and the Colorado are the only ones that can be used for commerce above tide-water.

14. There are forests of useful trees. The pine, oak, mahogany, rosewood, ebony, and mezquit (*mez-kcet'*) are plentiful. Tropical fruits, such as the lemon, orange, banana, and olive, are among the chief products.

15. Silver and gold are the chief sources of wealth, the silver-mines being among the oldest in the world. Copper, iron, and quicksilver are also mined.

16. The people are mostly Indians and Creoles. The latter are of Spanish and Indian descent. The language is Spanish, and the Roman Catholic is the religion of the country. There are schools and colleges in the cities.

17. Mexico consists of twenty-seven states, two territories, and one federal district. Each state has its own local government. The government is somewhat like that of the United States. The chief officer is elected every four years, and is called the President.

18. *Mexico* is the capital of the republic, and is situated on a plain that is 7400 feet high. It is noted for its fine public buildings and magnificent cathedral. *Vera Cruz* is the principal seaport.

CENTRAL AMERICAN STATES.

19. The Central American States—Guatemala, Honduras, Salvador, Nicaragua, Costa Rica, and Balize—occupy the long narrow strip between Mexico and South America. Balize belongs to Great Britain; the others are independent republics.

20. The surface is a plateau capped with high mountains which are a part of the Sierra Madre Range. Along the Pacific coast there are several

volcanoes. The coast of the Caribbean Sea is a marshy plain.

21. Most of the streams are short mountain-torrents like those of Mexico. Lake Nicaragua is the largest lake, and the San Juan, which is its outlet, is the only river that can be used by vessels.

22. The climate is somewhat like that of Southern Mexico, the lowlands being unhealthy, the highlands cool and better fitted for dwelling-places.

23. The people are of mixed Spanish and Indian blood and speak the Spanish language. They belong chiefly to the Roman Catholic Church.

24. Forests of beautiful and useful woods, such as mahogany, rosewood, and logwood, also of india-rubber trees, are abundant. Rice, coffee, tropical fruits, sugar-cane, and maize are cultivated. There are rich mines of gold and silver.

25. Salvador and Guatemala are the most important of the Central American States. One of the proposed ship-canals to connect the Atlantic and Pacific Oceans crosses Nicaragua. Costa Rica is noted for its coffee.

26. *New Guatemala* and *San Salvador* are the most important cities and seaports.

THE WEST INDIES.

27. When Columbus first sailed towards the New World it was his hope to reach India by a western route, instead of by the long voyage around Africa.

28. As we learned in another chapter, he did not reach the continent, but landed at one of the islands east of the mainland. It is not certain at which island he landed, but it is thought to be either Watling or Samana Island,—probably the latter.

29. Even after he had explored these islands and had returned to Spain with some of the natives, he still thought he had visited India, and so he called the islands the West Indies. The native people we call Indians to this day.

30. The West Indies are southeast of the United States. There are about a thousand of these islands, and they sweep in a broad curve from Mexico to the northern coast of South America.

31. Some of them are mountainous, others are low, wave-beaten reefs of coral. Among the high mountain peaks there are several volcanoes.

32. The climate is hot, but is somewhat cooled by the trade-winds. In summer destructive whirlwinds called hurricanes often sweep over the islands.

33. The products of the West Indies are much the same as those of Mexico. There are forests of mahogany, rosewood, and palms. Tropical fruits, sugar-cane, coffee, and spices are cultivated.

34. Nearly all of the native people have long since disappeared. Those who now live in the West Indies are Spaniards, Creoles, and Negroes.

35. The larger islands, Cuba, Hayti, Jamaica, and Porto Rico, are called the Greater Antilles. Cuba, the largest, belongs to Spain. *Havana*, its capital, is the principal sugar market in the world.

36. The island of Hayti comprises the republics of Hayti and Santo Domingo. Nearly all the peo-

ple are Negroes. *Port au Prince* (por'to-präns) and *Santo Domingo* are the capitals.

37. Jamaica belongs to England. It is best known for the ginger-root that is grown here. Allspice and tortoise-shell are exported. *Kingston* is the capital. Porto Rico belongs to Spain.

38. Most of the smaller islands form the Lesser Antilles, and belong to Great Britain. Barbadoes is the most densely peopled island in the world.

39. Trinidad is the largest island of this group. It is noted for its mud-volcanoes, and for a lake which is filled—not with water, but with pitch.

40. The Bahama Islands are north of Cuba. They are low coral reefs. Potatoes, onions, and sponges are exported to New York City. *Nassau*, on New Providence Island, is a health resort.

REVIEW LESSON.

What is said of the Aztecs?

The Aztecs, who formerly occupied Mexico, were a civilized people. They had built large cities, and had an organized government.

How did Mexico become a Spanish possession?

Cortez, a Spanish adventurer, with a body of soldiers, conquered the Aztecs, and then made the country a Spanish province.

When did Mexico become independent?

Mexico became independent of Spain in 1822.

What is said of the surface of Mexico and the Central American States?

The surface is low along the coast. The interior is a high table-land traversed by mountains in which there are many active volcanoes.

What is the climate of this region?

The climate is hot and unhealthy along the coast, but cool and delightful in the table-land.

What are the productions of Mexico and the Central American States?

The most important productions are mahogany, rosewood, logwood, and tropical fruits. Sugar and coffee are also exported.

What are the minerals of this region?

Some of the oldest and richest silver-mines in the world are in this region. Gold and copper are also mined.

What is said of the government of these states?

Mexico and five of the Central American States are independent republics. Balize belongs to Great Britain.

Of what do the West Indies consist?

The West Indies comprise a chain of islands extending from Mexico to South America. They consist of the Greater Antilles, the Lesser Antilles, and the Bahama Islands.

What is said of their surface?

The Greater and Lesser Antilles are rugged and mountainous. The Bahamas are low coral reefs.

What are the productions of these islands?

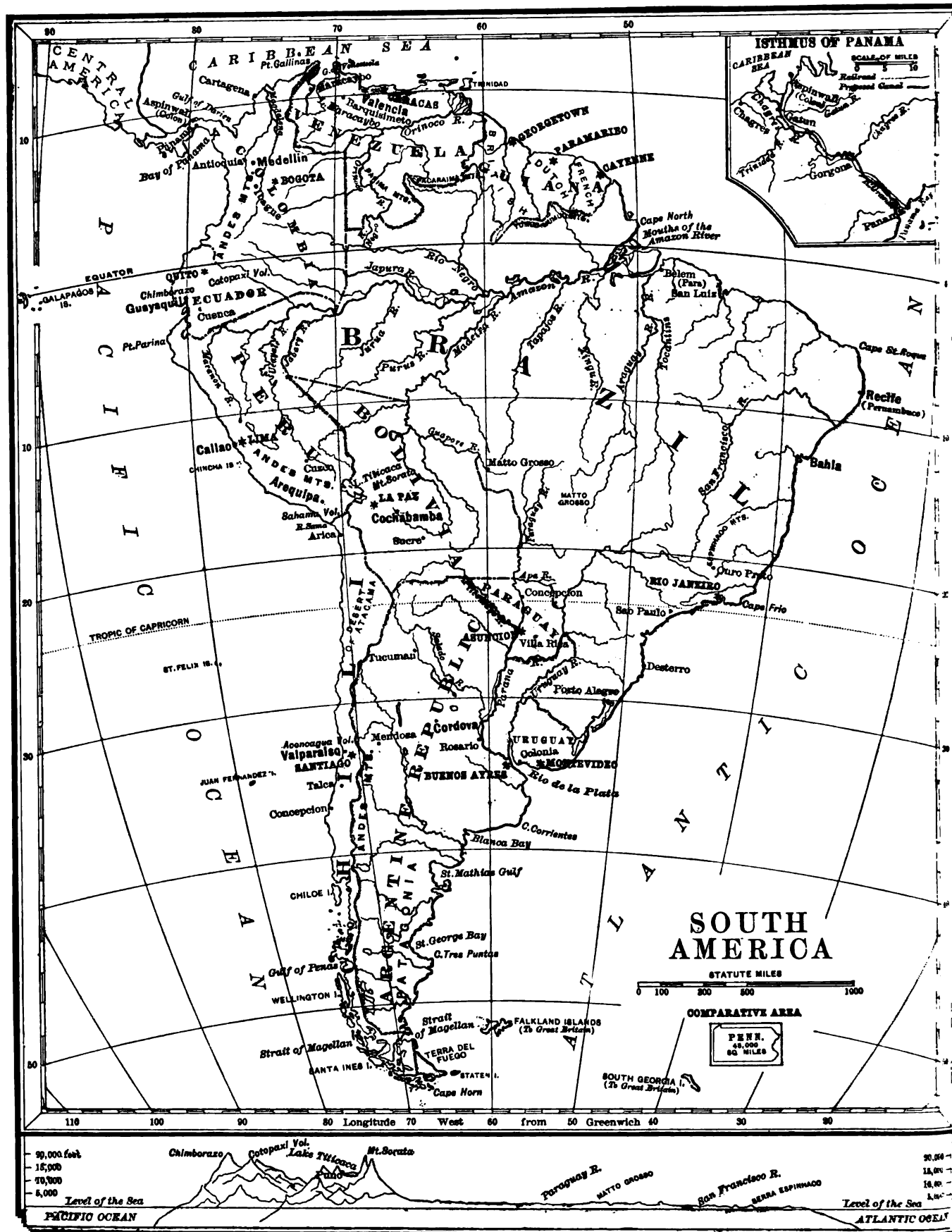
Tropical fruit, sugar, and coffee are the most valuable products and exports. Sponges are exported from the Bahama Islands.

To whom do the West Indies belong?

Cuba and Porto Rico belong to Spain. Hayti consists of two independent republics. Jamaica, the Bahamas, and most of the small islands belong to Great Britain.

What are the principal commercial centres?

Mexico is the largest city of Mexico. Vera Cruz is its seaport. New Guatemala is an important seaport. Havana is the largest sugar market in the world.



SOUTH AMERICA.

QUESTIONS ON THE MAP.

What sea and what ocean north of South America?—ocean west?—east? In what zones is South America? How many miles from Point Gallinas to Cape Horn? (*Use scale of miles.*)—from Cape St. Roque (*roke*) to Point Parina (*pā-re'nā*)?

What joins North America and South America? Of what mountains is this isthmus a part? What gulfs indent the northern coast? What island forms the southern extremity? What strait between this island and the mainland? What highlands on the west?—on the east? *Ans.—The Brazilian Highlands.* What tropic passes near the centre of South America? What three large rivers drain the greater part of the surface? Which is the largest country of this continent?

Brazil.—Which divisions surround Brazil? What are the only two countries that do not border on it? What mountains on the north?—in the east? Which river drains the northern part?—the eastern part?—the southern part? What and where is the capital? Name two other seaports north of the capital.

Venezuela.—What sea north of Venezuela (*ven-es-wā-lā*)?—gulf northwest?—country east?—countries south?—country west? What island northeast? To what group does this island belong? What lake in the northwestern part? What mountains between Brazil and Venezuela?—in the southern part? What river drains the greater part? What and where is the capital?—the chief seaport?

Argentine Republic.—What mountain-chain separates the Argentine (*ar'jen-tine*) Republic from Chili? What ocean and countries east? In what direction does the land slope? What rivers form the Rio de la Plata (*plā'tā*)? What gulf indents the eastern coast? What and where is the capital? What large city in the interior?

Paraguay.—What two countries north?—country east?—south and west? What rivers form part of the boundary between Paraguay and the Argentine Republic? What and where is the capital?

Uruguay.—What country northeast?—northwest? What water south? What and where is the capital?

Guiana.—Into what colonies is Guiana (*ghe-ā'nā*) divided? What ocean north?—country south?—mountains? What is the capital of British Guiana?—Dutch Guiana?—French Guiana?

Colombia.—What gulf indents the northern coast? What bay the western coast? What point at the extreme north? What mountains in the western part? What river drains the valleys be-

tween these ranges? What and where is the capital? What seaport on the Isthmus of Panama? What towns on the Isthmus of Panama? (*See vignette.*) How are they connected?

Ecuador.—What country north and east of Ecuador (*ek-wā-dōr'*)?—south? What ocean west? To what river-system do the waters of the eastern part belong? *Ans.—The Amazon.* What islands west of Ecuador? What volcano in the northern part? What peak in the western part? What and where is the capital?—the principal seaport?

Peru.—What countries north?—country south?—countries east? What lake between Peru and Bolivia? What two rivers drain the northern part? What and where is the capital?—its seaport?

Bolivia.—What countries bound Bolivia? Has Bolivia any sea-coast? What rivers form part of the eastern boundary? What branch of the Amazon River drains Bolivia? What peak near Lake Titicaca? What and where is the capital of Bolivia? What city southeast of the capital?

Chili.—How far along the western coast of South America does Chili extend? *Ans.—From Peru to Cape Horn—nearly 3000 miles.* What desert in the northern part? Name two large islands near the western coast that belong to Chili. What volcano near the central part? What and where is the capital?—its principal seaport?

REVIEW.

Where is the Caribbean Sea?—Gulf of Darien?—Gulf of Venezuela?—Bay of Panama?—Lake Maracaybo (*mar-ā-ki'bo*)?—Lake Titicaca?—Point Gallinas (*gā-lē'nās*)?—Point Parina?—Cape St. Roque?—Cape Horn?

Where are the Galapagos Islands?—Chiloe (*che-lo-ā'*)?—Wellington?—Terra del Fuego?

Describe the Amazon River—San Francisco—La Plata—Parana (*pā-rā-nā'*)—Magdalena—Orinoco—Madeira.

Where are the Andes Mountains?—Parime (*pā-re'mā*)? Where is Vol. Cotopaxi?—Chimborazo?—Aconcagua (*ā-kon-kā'gwā*)?—Sorata?

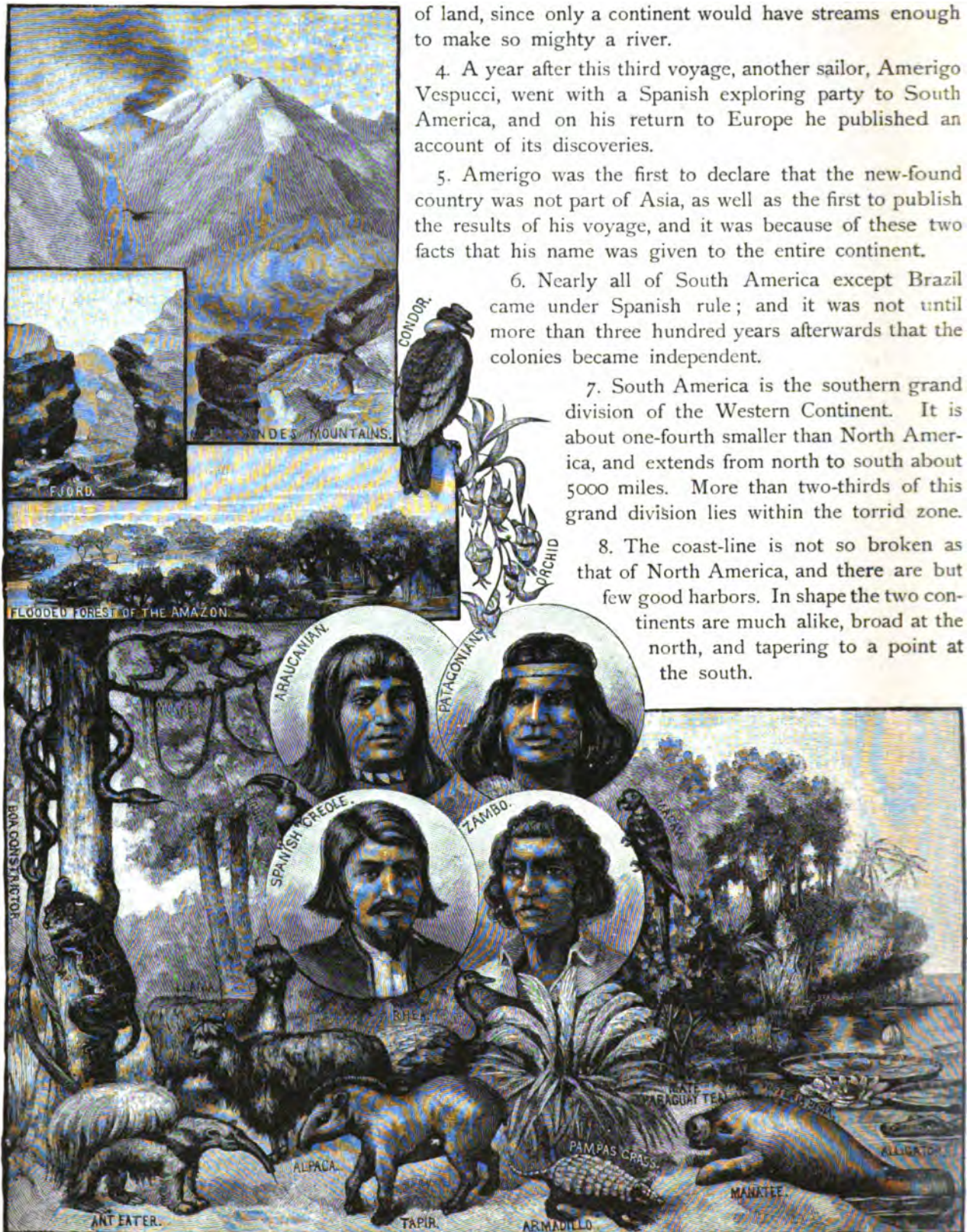
Where is Rio Janeiro (*re'ō jā-nā'ro*)?—Bahia (*bā-e'ā*)?—Caracas?—Bogota?—Quito (*ke'to*)?—Guayaquil (*gwā-ā-keel'*)?—Lima (*le'mā*)?—Callao (*kā-lā'o*)?—Santiago?—Valparaiso?—Buenos Ayres (*bo'nos ā'riz*)?—Cordova?—Montevideo (*mon-ta-ve-dā'o*)?—Asuncion (*ā-soon-se-ōn'*)?—Georgetown?—Paramaribo?—Cayenne (*kā-yēn'*)?

1. Columbus made his third voyage to the shores of the New World in 1498. It was a long, dreary voyage, and his vessels had been at sea more than three months before land was sighted.

2. A high bluff crowned with three peaks first appeared in sight, and so Columbus named it Trinidad, a Spanish word meaning *trinity*. Look at the

map of South America, and you will find this island just north of the mouth of the Orinoco River.

3. For many days he sailed along the coast, thinking the points of land he saw were islands. But when at length he reached the mouth of the Orinoco and saw the great flood it poured into the sea, he at once knew there must be a great body



9. The surface of South America is much like that of North America. The inland plain of each continent is bordered by mountain-ranges on both the western and the eastern coast.

10. The Andes Mountains are Western Highlands, and they enclose some of the loftiest plateaus in the world.

11. They also contain some of the loftiest peaks of the Western Hemisphere, many of them being active volcanoes. This entire region is often shaken by frightful earthquakes.

12. The Eastern Highlands consist of a number of irregular ranges. These highlands form the Brazilian Mountain System.

13. The Great Plain of South America is much like that of North America. It lies between the two mountain-systems, and is crossed by a height of land which separates the great river basins.

14. Three great rivers, the Orinoco, the Amazon, and the Plata River, drain this central plain. Their basins are nearly in the same level, and during the rainy season they are often connected by streams of water.

15. The Llanos (*lyä'nös*) are the plains of the Orinoco. In the dry season they are parched and bare, but when the rains set in they are flooded until they become a great inland sea.

16. When the waters disappear, millions of horses, cattle, and sheep roam over these plains and fatten on the rich juicy grass which grows so profusely.

17. The Silvas are the plains of the Amazon. They are covered with a thick tangle of trees and climbing plants. In these forests are found the palm, rosewood, mahogany, and india-rubber trees.

18. On the higher land are the cacao (*kä-kä'o*) and cinchona (*sin-ko'na*) trees. The former yields a bean from which chocolate is made, and from the bark of the latter quinine is made.

19. The Pampas of the south are treeless plains, covered with tall, feathery pampas grass. Like the Llanos, these plains are the herding places for millions of cattle.

20. There are many kinds of animals in South America. The forests are alive with parrots, macaws, and other birds of richly-colored plumage. Troops of chattering monkeys clamber among the

trees, and enormous serpents and alligators infest the flooded plains.

21. In the highlands the llama, an animal somewhat resembling the camel, is used in carrying burdens. The alpa'ca, a similar animal, is valuable for its fine wool. The condor, the largest bird of flight, inhabits the high crags of the Andes.

22. The puma, an animal of the tiger kind, lives in the highlands. The ant-eater and the armadillo are found in this grand division only.

23. South America is famous for its mines of gold, silver, and copper, which are found throughout the Andes Mountains. The diamond mines of Brazil produce the finest of gems.

24. Most of the people are Indians, but there are many Spanish and Portuguese creoles. These are the most industrious and enterprising of the population. There are also many negroes.

25. **Brazil.**—Brazil is almost as large as the whole of the United States. It lies chiefly in the valley of the Amazon. In 1500 it became a Portuguese colony, and in 1822 an independent empire. It is now a republic.

26. Although very little of Brazil is cultivated, the coffee plantations yield more than one-half of the world's supply of coffee. Sugar, cotton, indigo, tobacco, and tropical fruits are among the chief products. Gold, silver, and precious stones are abundant.

27. *Rio Janeiro* is the capital, and is one of the most important cities in South America. *Bahia* is noted for its fine harbor.

28. **Venezuela.**—The name of Venezuela was given to this region because the Spanish explorers who came to Lake Maracaybo and the Orinoco River found Indian villages built on piles. Thinking the villages looked like Venice in Italy, they named the place Venezuela, or "Little Venice."

29. It is nearly ten times as large as the New England States, and lies chiefly in the basin of the Orinoco River. Herds of cattle pasture on the plains, and there are thick forests in the highlands.

30. Farming and stock-raising are the chief employments. Cattle-products, such as hides, horns, meat, and tallow, with cacao and coffee, are the chief exports.

31. *Caracas* is the capital. It has often been injured by earthquakes. *Valencia* is a large seaport.

32. **Argentine Republic.**—The Argentine Republic is the second country of South America in size, and the third in the number of its people.

33. It includes the plains of Patagonia in the south, the Pampas of the central part, and a vast region called the Chaco, or hunting ground, in the north.

34. It is one of the leading countries in the world in the number of cattle and the value of their products. Hides, tallow, horns, and preserved meat are exported.

35. There are more miles of railway in the Argentine Republic than in any other South American state.

36. *Buenos Ayres* is the capital and chief seaport. Its people are mostly Europeans. *Cordova* is an important centre of trade.

37. **Paraguay.**—Paraguay is about twice the size of Pennsylvania. It is in the basin of the Plata River. The northern part is thickly wooded; the southern part is marshy.

38. The chief exports are mate (*mā-tā'*) or Paraguay tea, tobacco, cotton, sugar, and manioc.

39. *Asuncion* is the capital and largest city.

40. **Uruguay.**—Uruguay, the smallest of the South American republics, is larger than the New England States.

41. Cattle-raising is the chief employment, and cattle-products are the principal exports.

42. *Montevideo* is the capital, and is one of the chief seaports of South America. Many Americans reside there.

43. **Guiana.**—Guiana is the only part of South America that belongs to European nations. The three provinces are subject respectively to the British, Dutch, and French governments.

44. The surface is low and unhealthy along the coast. In the interior it is higher and much of it is wooded. The climate is hot and moist.

45. Along the coast there are settlements of white people. Tribes of Indians live in the interior. Sugar, molasses, Cayenne pepper, and cabinet-woods are exported. Gold is mined in Dutch Guiana.

46. *Georgetown* is the capital of British Guiana,

Paramaribo of Dutch Guiana, and *Cayenne* of French Guiana.

47. **Colombia.**—This republic is more than three times as large as California. It includes the Isthmus of Panama. The Andes extend through this country in three ranges, between which lie fertile valleys.

48. A railway crosses the isthmus from Colon to Panama, and a ship-canal to connect the two oceans has been partly constructed.

49. The people are chiefly engaged in agriculture and stock-raising. The leading exports are cinchona bark, coffee, gold, and hides.

50. *Bogota* is the capital and the largest city. It is on a fertile table-land more than 8000 feet above the sea-level. *Medellin* is the centre of a large inland trade.

51. **Ecuador.**—Ecuador is the Spanish name for equator, and the country is so named because the equator crosses its northern limits. It includes the Galapagos Islands, which lie west of it, and is a little larger than the State of Nevada.

52. The Andes Mountains cross the western part in two parallel ranges. The valleys between these ranges are very high above the sea. Cotopaxi is said to be the loftiest active volcano. Around Quito there are twenty volcanic peaks.

53. Most of the people are Indians, uneducated, and content to live without making any effort to better their condition. Cinchona bark, cacao, and india-rubber are the leading exports.

54. *Quito* is the capital and the largest city. It is one of the highest cities in the world, being almost two miles above the sea. Although it is nearly on the equator, yet because of the great height the climate is delightful. *Guayaquil* is the chief seaport.

55. **Peru.**—Not long after the voyages of Columbus a company of Spanish soldiers under Pizarro landed on the coast of Peru. They found a civilized tribe of people whose kings were called Incas, and after many hard battles they succeeded in conquering them. These people showed great skill as engineers, and had built wonderful roads over the mountain-ranges and across the deserts.

56. Peru has an extensive sea-coast and fine

harbors. There are several railways, one of which crosses the Andes. Sugar and cotton are raised. Wool and hides are among the products; saltpetre and copper are mined.

57. *Lima*, the capital, is a large and wealthy city. *Callao* is the seaport of Lima, and is connected with it by rail.

58. *Bolivia*.—Bolivia has no sea-coast, but carries on its trade through the ports of Peru and Chili. The highland region is rich in silver, which is the chief export.

59. Wool, coffee, and coca are also largely exported. The india-rubber from this region is the finest in the world.

60. *La Paz*, the largest city, is the real capital, but nominally the seat of government is at *Sucre*. *Cochabamba* has large manufactures.

61. *Chili*.—Chili is a narrow strip of land that extends along the Pacific Ocean a distance of almost 3000 miles. The northern part is desert land, the central and southern parts are fertile.

62. It is the most enterprising of the South American States. Railways connect the important towns and extend to Buenos Ayres. The chief exports are copper, wheat, sugar, cotton, and Peruvian bark. Silver and coal are abundant.

63. *Santiago* is the capital, and *Valparaiso* is the chief seaport.

REVIEW LESSON.

Name the divisions of the western part of South America—of the eastern part. Give the capital, largest city, and seaport of each.

Who was the first European explorer to visit South America?

Columbus was the first European who visited South America. He explored the northern coast, and discovered the Orinoco River.

After whom was America named?

America was named after Amerigo Vespucci, an explorer who published the first description of the New World.

What is said of the shape and surface of South America?

South America resembles North America in shape and surface. There is a high mountain-system on the west and a low one on the east.

What rivers drain the greater part of South America?

The Orinoco River drains the northern plains, or llanos; the Amazon, the central plains, or silvas; and the Rio de la Plata, the southern plains, or pampas.

What is the climate of South America?

Most of South America is in the torrid zone. The climate is therefore hot in the lowlands, but mild in the highlands. In the south it is cold and bleak.

What is said of the rainfall?

In the torrid zone rainy and dry seasons alternate. During the rainy season the plains are flooded; during the dry season they are parched and bare.

What is said of the political divisions?

Guiana consists of British, French, and Dutch colonies. All the other states of South America are republics.

In what does Brazil excel?

Brazil, the largest South American state, produces more than one-half the world's supply of coffee.

What is said of Venezuela and Guiana?

They have a low coast and a high interior. Coffee, spices, and gold are exported. Venezuela is noted for cacao, and Guiana for cayenne pepper.

For what are the Argentine Republic, Paraguay, and Uruguay noted?

They produce more cattle than any other part of the world. Horns, hides, and tallow are exported.

What is said of Colombia?

Colombia includes the Isthmus of Panama. A railway has been built across the isthmus from Colon to Panama.

For what are Ecuador, Peru, and Bolivia noted?

They are crossed by the highest ranges of the Andes, and contain many volcanoes. They produce silver, saltpetre, cinchona bark, and india-rubber.

For what is Chili noted?

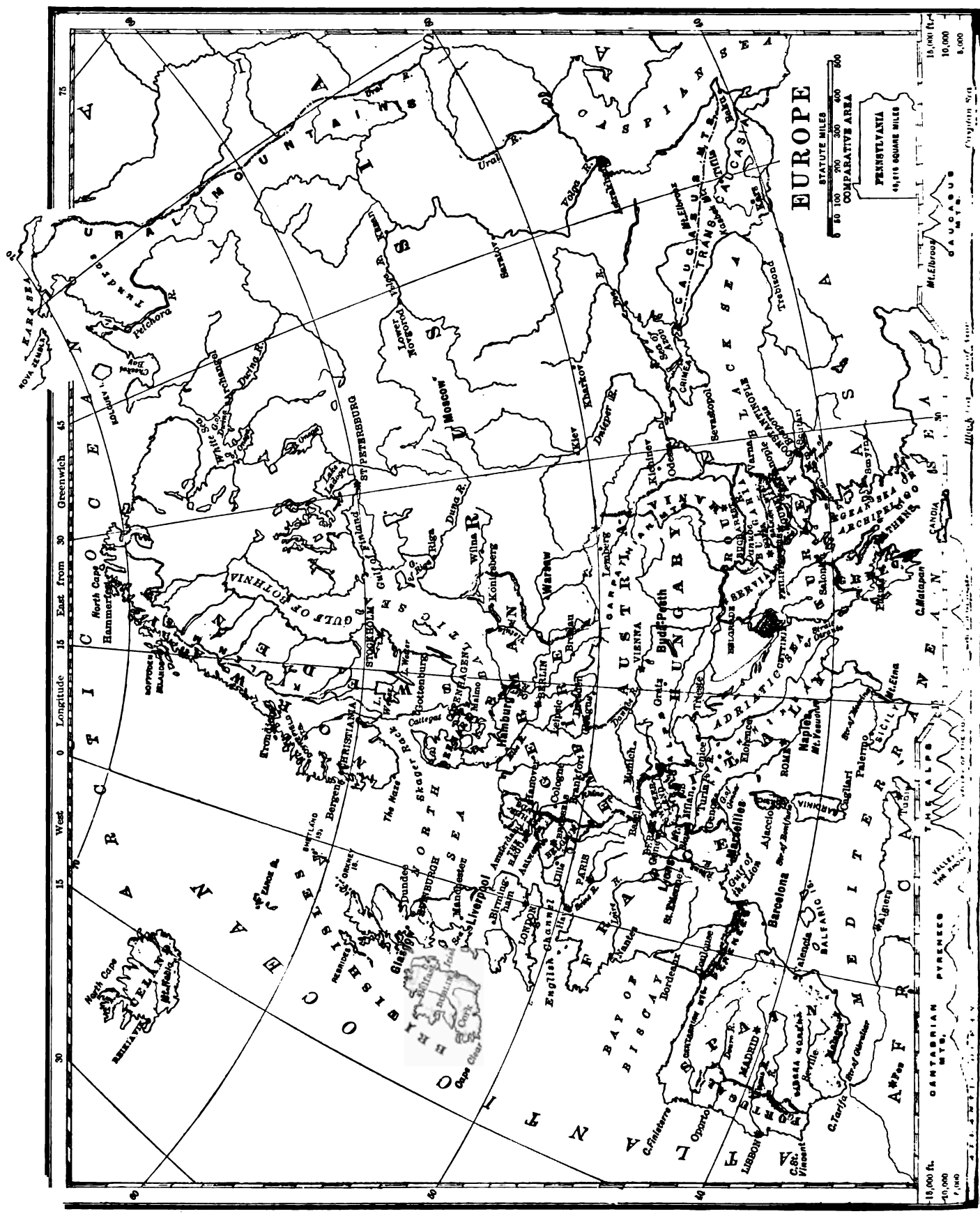
Chili is the most progressive of the South American States. It is one of the foremost copper-producing countries in the world.

Name the principal seaports of South America.

Buenos Ayres and Montevideo export cattle-products; Rio Janeiro, coffee and sugar. Panama, Callao, and Valparaiso are the principal Pacific ports.

For what are Quito and La Paz noted?

They are situated high in the Andes, near rich silver-mines, and are subject to earthquakes.



EUROPE

STATUTE MILES
0 100 200 300 400 500
COMPARATIVE AREA

PENNSYLVANIA
44,816 SQUARE MILES

15,000 ft.
40,000
7,000

Copyright 1911

EUROPE.

QUESTIONS ON THE MAP.

What parallel crosses the northern border?—the southern border? How many miles from Cape Clear to the eastern extremity?—from North Cape to Matapan?

By what waters are Norway and Sweden almost surrounded? What waters almost surround the Spanish Peninsula?—the Italian Peninsula? What group of islands west of Europe? What island northwest? What large islands south of Italy? What island southeast of Greece?

What highlands in the Scandinavian Peninsula? What mountains in Switzerland and Austria-Hungary?—near the eastern boundary of Russia?—near the southeastern? What mountains between France and Spain? Where is the great plain of Europe? What is the southwestern cape of the British Isles?—the southern cape of Spain?—the southern cape of Greece?—the northern cape of Norway?

In what highland do most of the rivers of western Europe rise?—eastern Europe? *Ans.*—*The Valdai Hills.* Which is the largest river flowing into the North Sea? *Ans.*—*The Rhine River.*—Caspian Sea? Which is the chief river of Central Europe? *Ans.*—*The Danube River.* Into what does it flow? Where are most of the lakes in Europe?

Russia.—What ocean and sea north?—country and sea east?—south? What peninsula northwest? What sea and gulf between them? What mountains in the southeastern part? Which is the longest river of Russia? What and where is the capital of Russia? What city in the central part?—in the western part on the Vistula River?

Norway and Sweden.—For what is the western coast of Norway noted? *Ans.*—*For the deep fjords and rocky islands along the coast.* Name the principal group of islands. What mountains extend along the coast? What and where is the capital of Norway?—of Sweden?

Denmark.—Is the surface high or low land? What large island northwest of Europe belongs to Denmark? What waters nearly surround Denmark? What and where is the capital of Denmark?—of Iceland?

Spain.—What bay and country north? What sea east? What strait between Africa and Spain? What mountains

between France and Spain?—in the north?—in the south? What and where is the capital?—the chief seaport?

Portugal.—What country north and east? What ocean south and west? What river divides Portugal almost equally? What and where is the capital? Name a seaport of the northwestern coast.

German Empire.—What seas north? What country east? What two countries south?—three west? What river drains the western part? What river flows into the North Sea? What two flow into the Baltic Sea? What and where is the capital? What large city on the Elbe?—on the Elbe in the south, near Austria-Hungary?—in the southern part?

The Netherlands.—What sea northwest and north? What country south?—east? For what is the surface noted? *Ans.*—*About one-third is below the sea-level.* What river crosses the southern part? What and where is the capital of the Netherlands?—the largest city?

Belgium.—What sea northwest? What country north-east?—east?—southwest? What and where is the capital of Belgium?—the chief seaport?

France.—What channel north? What countries east? What sea and country south? What bay west? What mountains between France and Spain? What river flows into the English Channel?—into the Gulf of the Lion? What large island belongs to France? *Ans.*—*Corsica.* What and where is the capital? What seaport in the southern part?—at the mouth of the Seine (*see*) River?

Switzerland.—What countries surround Switzerland? What mountains between Switzerland and Italy? What river of France rises in Switzerland? What and where is the capital? Name two other cities.

Italy.—By what waters is Italy nearly surrounded? What mountains extend through Italy? What volcanoes in Italy? What islands belong to Italy? *Ans.*—*Sicily and Sardinia.* What river drains the northern part? What and where is the capital? What port on the Adriatic coast?—two on the Mediterranean coast?

Turkey and the Balkan States.—What country south?

—sea and strait west? What sea and straits between Asia and Turkey? What and where is the capital? What provinces belong to Turkey? *Ans.*—*Bornia and East Roumelia.* What principality? *Ans.*—*Bulgaria.* What and where is the capital of East Roumelia?—of Bulgaria?

What countries surround Serbia?—Montenegro? What sea also touches Montenegro? What and where is the capital of Serbia?—of Montenegro?—of Roumania?

Austria-Hungary.—What mountains between Roumania and Austria-Hungary? What mountains in the western part? What river, with its tributaries, drains the greater part? What and where is the capital? What city on the Danube in the central part?—seaport on the western coast?

Greece.—What country north?—sea east?—sea south and west? What cape extends into the Mediterranean Sea? What island southeast of Greece? What is the capital?

REVIEW.

Where is the North Sea?—Baltic Sea?—Black Sea?—Sea of Azov?—Adriatic Sea?—Mediterranean Sea?—Strait of Gibraltar?—Bay of Biscay?—English Channel?

Where is Iceland?—the British Isles?—Balearic Islands?—Nova Zembla?—Sicily?—Sardinia?—Corsica?—Shetland Islands?

Where is North Cape?—Finisterre?—Matapan?—Tarifa? Describe the Rhine River—Rhône—Volga—Dwina—Danube. Where is Lake Ladoga?—Wener?—Onega?

Where are the Alps Mountains?—Caucasus?—Dovre-field?—Ural?—Carpathian?—Pyrenees?—Apennines?—Balkan? Where is Mt. Blanc?

Where is St. Petersburg?—Moscow?—Stockholm?—Copenhagen?—Christiania?—Madrid?—Barcelona?—Lisbon?—Oporto?—Paris?—Lyons?—Marseilles (*mar-saies'*)?—Naples?—Milan (*mil/lan*)?—Venice?—Belgrade?—Athens?—Moscow?—Warsaw?—Buda-Pesth?—Trieste (*tree-st'*)?—London?—Liverpool?—Glasgow?—Hamburg?—Munich?—Cologne?—Berlin?—Constantinople?—Brussels?—Antwerp?—Amsterdam?—The Hague (*haig*)?—Cettinje (*chet-tin-je*)?

1. The oldest written records do not tell us much about the early history of Europe. We know, however, that nearly three thousand years ago there was a great empire called Phœnicia (*fe-nish'e-a*), on the eastern coast of the Mediterranean Sea.

2. We also know that two other great empires, Greece and Rome, were founded at different times farther westward on the shores of the Mediterranean.

3. At the time these empires existed, there were people whom the Greeks and Romans called barbarians (or other people) all over the central and northern parts of Europe.

4. The Greeks and Romans became each in turn the most powerful nation in the world. They conquered many of the barbarian tribes and took their lands. Yet in the course of time they themselves were conquered by the very people whom they had taught to fight.

5. We know little about the early history of these barbarian people, or where they came from. We do know, however, that they were of Aryan descent.

6. They learned the arts and sciences of the people whom they conquered. By means of this knowledge, in conjunction with their bravery and intelligence, their descendants finally founded the most powerful nations in the world.

7. Europe is the smallest of



the grand divisions. It is not a distinct mass of land, but is a part of the great body of land often called Eurasia.

8. No other grand division has such a broken coast-line or so many gulfs, bays, and seas. The Mediterranean, Black, and Baltic Seas, although arms of the ocean, are practically inland seas.

9. Europe is not much like the divisions of the Western Continent either in shape or in surface. Look at the relief map of Europe, and you will notice a wide belt of highlands along the southern part and a lower one in the northern part.

10. The Southern Highlands form the Alpine System. This system consists of many ranges reaching in almost every direction. The higher ranges, however, extend nearly east and west.

11. The Northern Highlands form the Scandinavian Plateau. There is also a low, broken range in the eastern part, called the Ural Mountains.

12. The great plain of Europe is enclosed by these mountains and highlands. It is a low plain, and so nearly level that the Valdai Hills, scarcely a thousand feet high, form the watershed for nearly all the large rivers of Europe.

13. The Danube, Rhine, and Rhone are the largest rivers of the highlands, the Volga and the Don of the plains. The Volga flows into an inland lake called the Caspian Sea.

14. The western part of Europe is swept by winds which have been tempered by warm ocean waters. There is everywhere an abundant rainfall. The British Isles are in the same latitude as the peninsula of Labrador in North America.

15. But, while Labrador is covered with ice and snow nearly all the year, the British Isles enjoy a climate even milder than that of Pennsylvania.

16. In the eastern part the climate is very severe. The summers are hot and moist; the winters very cold. The countries of the Mediterranean coast are famous for their pleasant healthful climate.

17. The people of Europe are mainly of Aryan descent, but the Turks, Hungarians, and a few tribes in Russia belong to the Turanic or Mongolian race.

18. There are three great families to which most of the Europeans belong. One includes the French, Spanish, Italians, and Portuguese. The second embraces the Russians and Poles. The third includes the English, Germans, Scandinavians, and Dutch.

REVIEW LESSON.

What is said of the early history of Europe?

But little is known of the early history of Northern Europe. There were great empires built on the shores of the Mediterranean Sea.

By whom were the people of Northern Europe conquered?

Many of the tribes of Northern Europe were conquered by the Romans, who taught them civilization.

What is said of the surface of Europe?

The greater part is a vast plain. The high Alpine Mountain System forms the southern border; the low Scandinavian highlands, the northern.

What is said of the coast-line?

In proportion to its size Europe has a longer coast-line and more gulfs and bays than any other grand division.

What is said of the large seas which surround Europe?

The Mediterranean, Black, and Baltic Seas have only narrow straits leading to the ocean. The

Caspian Sea is an inland lake below the sea-level.

What are the principal rivers of the highlands?

The Rhine, Rhone, and Danube are the principal rivers of High Europe. Their sources are the glaciers of the Alps.

What is said of the rivers of Low Europe?

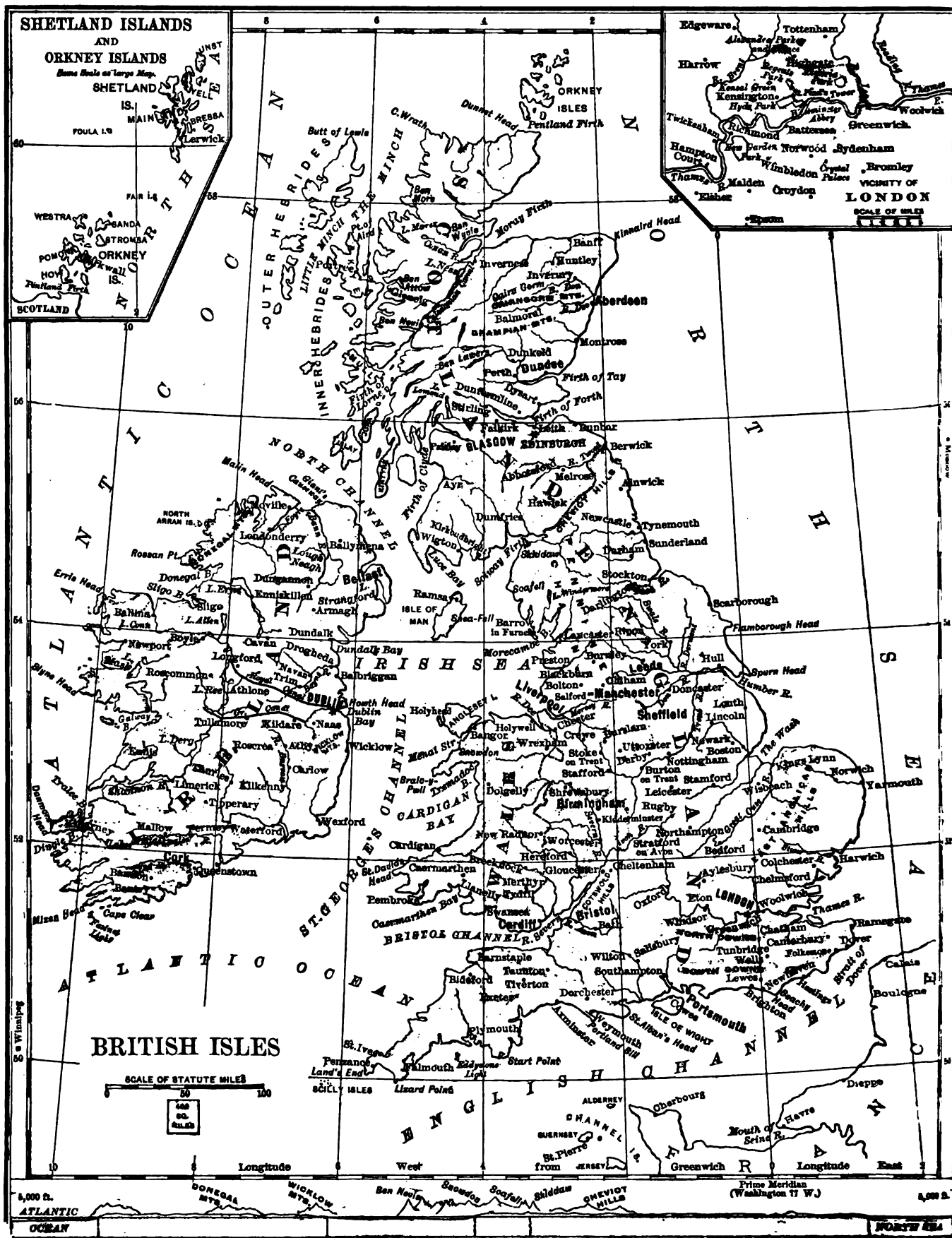
Most of the rivers of Low Europe rise in the Valdai Hills. The Volga, the largest river of Europe, flows into the Caspian Sea.

What is said of the climate of Europe?

In the western part of Europe the climate is tempered by warm ocean winds. In the eastern part the winters are very cold and the summers moist and hot.

From what race are most of the people descended?

Most of the people of Europe are of Aryan descent. The Turks, Hungarians, and a few tribes of Russia belong to the Turanic or Mongolian race.



BRITISH ISLES.

QUESTIONS ON THE MAP.

How far north do the British Isles extend? *Ans.—About lat. 61° N.* How far south? Through what country does the Prime Meridian pass? Is the greater part of the British Isles in east or in west longitude? What country of Asia is in the same latitude?—of North America? (*See margin of map.*) What waters surround these islands? What island includes England, Scotland, and Wales? For what is their coast noted? What is the general direction of these indentations? Where are most of the highlands?

England and Wales.—What country north?—sea east?—channel and strait south?—ocean, channel, and sea west? What cape in the extreme southwest? What bay indents the western coast of Wales? What channel south? What island northwest of Wales?—south of Scotland?—on the south coast of England?—near the coast of France? What mountain-chain in the northwest? What hills between England and Scotland? What river flows into Bristol Channel? On what river is London situated?

What is the capital of the British Empire? What seaport on the English Channel?—at the mouth of the Mersey River? What seaports on the Severn River? Name four large cities in the interior.

Scotland.—What firth and what river between England and Scotland? What sea on the east?—country south?—ocean west? What channel between Scotland and Ireland? What groups of islands north?—northwest? (*See vignette.*) What capes on the north coast? What firths indent the eastern coast?—the western? What canal and firths divide Scotland into two parts? Name two mountain-ranges in the north. What is the highest peak in Scotland? *Ans.—Ben Nevis.*

What and where is the capital? What city west of the capital?—What seaport on the North Sea?—near the mouth of the Tay?

Ireland.—What ocean west?—channel northeast?—sea and channel east?—ocean south? What is the northern point?—the southern? What light-house on the southern coast? What large bays on the western coast?—on the eastern? What mountains in the northwest? Which is the largest river of Ireland? *Ans.—The Shannon River.* What is the largest lake in Ireland? What lakes in the southwest? *Ans.—Killarney Lakes.*

What and where is the capital? What city in the south on the river Lee?—what is its seaport? What city in the northeast?

REVIEW.

Where is the North Sea?—English Channel?—St. George's Channel?—Irish Sea?—North Channel?—Moray Firth?—the Wash?—Strait of Dover?—Cardigan Bay?—Dundalk Bay?—Galway Bay?—Firth of Clyde?—Firth of Forth?

Where are the Hebrides Islands?—Shetland Islands?—Orkney Islands?—Channel Islands?—Isle of Wight?—Isle of Man?—Anglesey Island?

Where is Cape Wrath?—Land's End?—Cape Clear?—Malin Head?

Describe the River Thames—Severn—Mersey—Tweed—the Caledonian Canal. Where is Lough Neagh (*lōh nā*)?—Killarney Lakes?—Windermere?

Where are the Cairngorm Mountains?—Grampian?—Cheviot Hills?—Donegal?—Ben Nevis Peak?

Where is London?—Manchester?—Liverpool?—Birmingham?—Leeds?—Sheffield?—Portsmouth?—Cardiff?—Edinburgh?—Glasgow?—Aberdeen?—Belfast?—Dublin?—Cork?

1. The British Empire comprises about one-sixth of the land-surface of the earth, and its possessions together are as large as the whole of North America.

2. All these vast possessions have been gained by a people living on an island hardly twice the size of Pennsylvania. This island is now called Great Britain. With Ireland and the outlying islands it forms the British Isles.

3. The British Isles are separated from the mainland of Europe by a channel so shallow that nowhere could the Capitol at Washington be placed in it so that the top of the dome would not reach out of water.

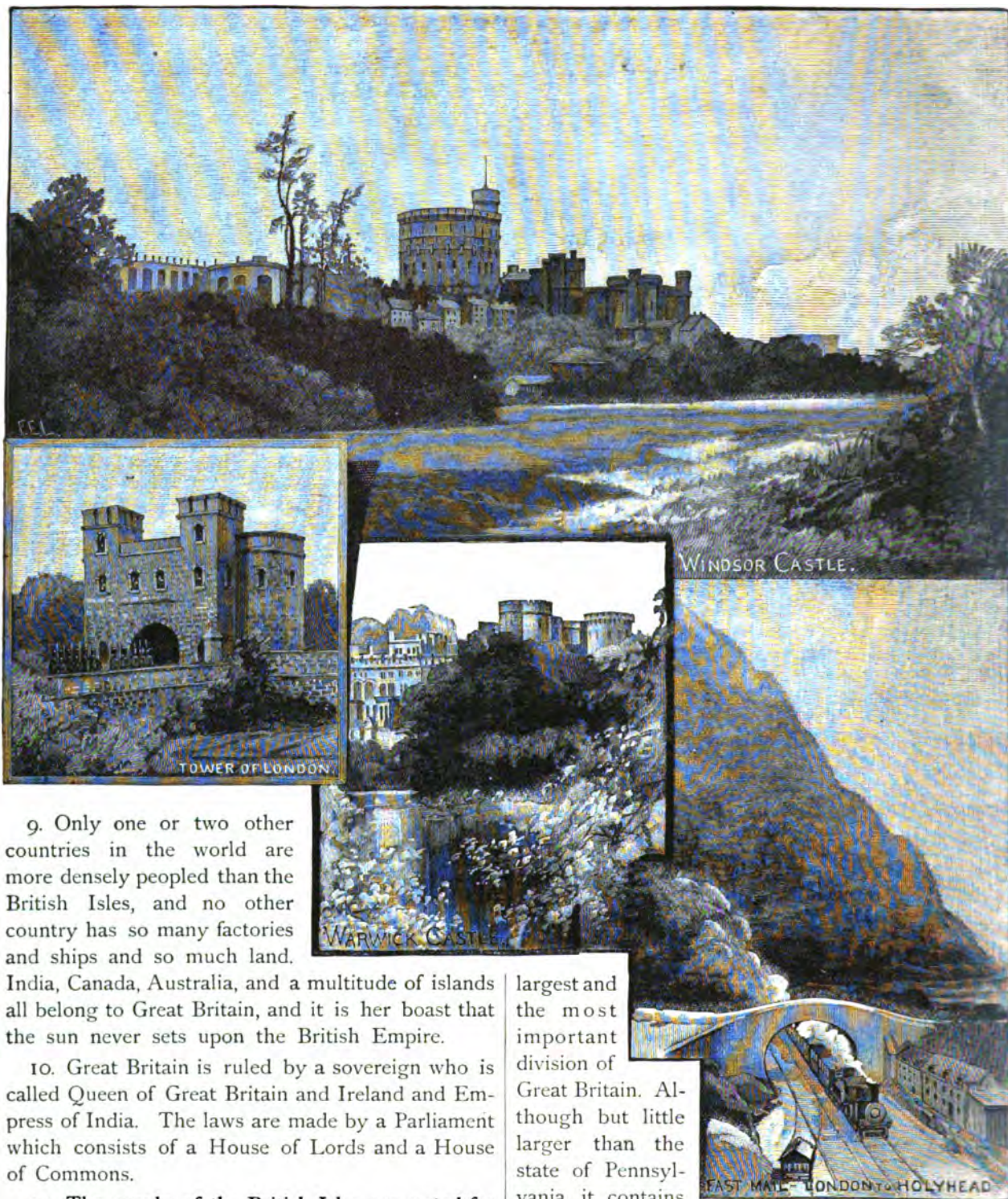
4. But little of the surface is level, although there are no mountains more than 4500 feet high. In the north it is very rugged.

5. The western coast is much broken, and channels have been ploughed deep into the surface by the great sheet of ice that once spread from the Scandinavian Highlands. One of these channels divides Scotland into two parts.

6. Although the British Isles are farther north than the New England States, they have a much milder climate. This is owing to the warm ocean winds which blow from the south.

7. The rivers are short, but the mouth of every one is a bay which is an excellent harbor. There are many small lakes, which are noted for their beautiful scenery.

8. The great wealth of the British Isles consists in the mines of coal and iron. Because of these, factories and furnaces have been built in almost every part of the kingdom.



9. Only one or two other countries in the world are more densely peopled than the British Isles, and no other country has so many factories and ships and so much land. India, Canada, Australia, and a multitude of islands all belong to Great Britain, and it is her boast that the sun never sets upon the British Empire.

10. Great Britain is ruled by a sovereign who is called Queen of Great Britain and Ireland and Empress of India. The laws are made by a Parliament which consists of a House of Lords and a House of Commons.

11. The people of the British Isles are noted for their learning, intelligence, and enterprise. The British Empire is one of the foremost nations of the world.

12. **England.**—England, including Wales, is the

largest and the most important division of Great Britain. Although but little larger than the state of Pennsylvania, it contains very nearly six times as many people.

13. Most of the farming land is in the southern and eastern parts. In the long, narrow strip south of Bristol Channel are the tin-mines of Cornwall.

They are the oldest in the world. The coal and iron fields are chiefly in the western part.

14. In no other part of the world are there so many large cities close together. They are full of factories and mills, and thousands of ships carry the goods made in these cities to all parts of the world.

15. *London* is the capital of the British Empire. It is the largest city in the world, and the chief centre of commerce. Nearly five millions of people live in the city and the surrounding suburbs.

16. *Liverpool* is the principal seaport. Nearly all the vessels trading between English and American ports land their cargoes here. *Birmingham* is noted for its iron manufactures, *Manchester* for its cotton mills, and *Leeds* for its woolen factories.

17. *Scotland*.—Scotland has a broken and rugged surface. The fertile Lowlands between the Firth (or bay) of Forth and the Firth of Clyde are the most densely peopled part of Scotland, and nearly all of the large cities and towns are in this part.

18. The Highlands are bleak and bare. Barley and oats are cultivated in the moors, and sheep graze on the heather-covered slopes.

19. The Scotch people are noted for their thrifty ways and their independent spirit. They are well educated, and some of the most famous soldiers, statesmen, and poets have been of Scotch birth.

20. *Edinburgh*, the capital, is celebrated for its university. *Glasgow* is the chief manufacturing city of Scotland. More iron and steel ships are made here than in all the rest of the world.

21. *Ireland*.—Ireland was early settled by the Celts, a people renowned for their intelligence and bravery.

22. In the thirteenth century it was conquered by the English, and the land was divided among the followers of the English king. Since that time the country has not been prosperous.

23. Ireland is celebrated for its beautiful scenery. Farming is the chief pursuit; flax and potatoes are the principal products. The schools are among the best in Europe. The Roman Catholic religion prevails.

24. *Dublin*, the capital and largest city, is noted for its university. *Belfast* is noted for its linen factories. The finest linen in the world is made here.

REVIEW LESSON.

Name the divisions of the British Isles. Give the capital and chief seaport of each.

What does the British Empire comprise?

The British Empire comprises the islands of Great Britain and Ireland, together with Canada, India, Australia, and other possessions.

What are the European possessions of the British Empire called?

The European possessions are called the United Kingdom of Great Britain and Ireland.

What is said of their size and population?

Great Britain and Ireland are about three times the size of Pennsylvania. They are among the most thickly peopled countries of Europe.

What is the chief source of wealth of the British Islands?

The mines of coal and iron are the chief source of wealth, and because of them, Great Britain is the foremost manufacturing country in the world.

What is said of the government of Great Britain?

The laws are made by Parliament. The ruler is the Queen of Great Britain and Ireland, and Empress of India.

For what is England noted?

It is the foremost country of the world in commerce and manufactures. In no other part of the world are there so many large cities close together.

What is said of Scotland?

Grain-farming and wool-growing are important industries. More iron and steel ships are made in Scotland than in any other part of the world.

For what is Ireland noted?

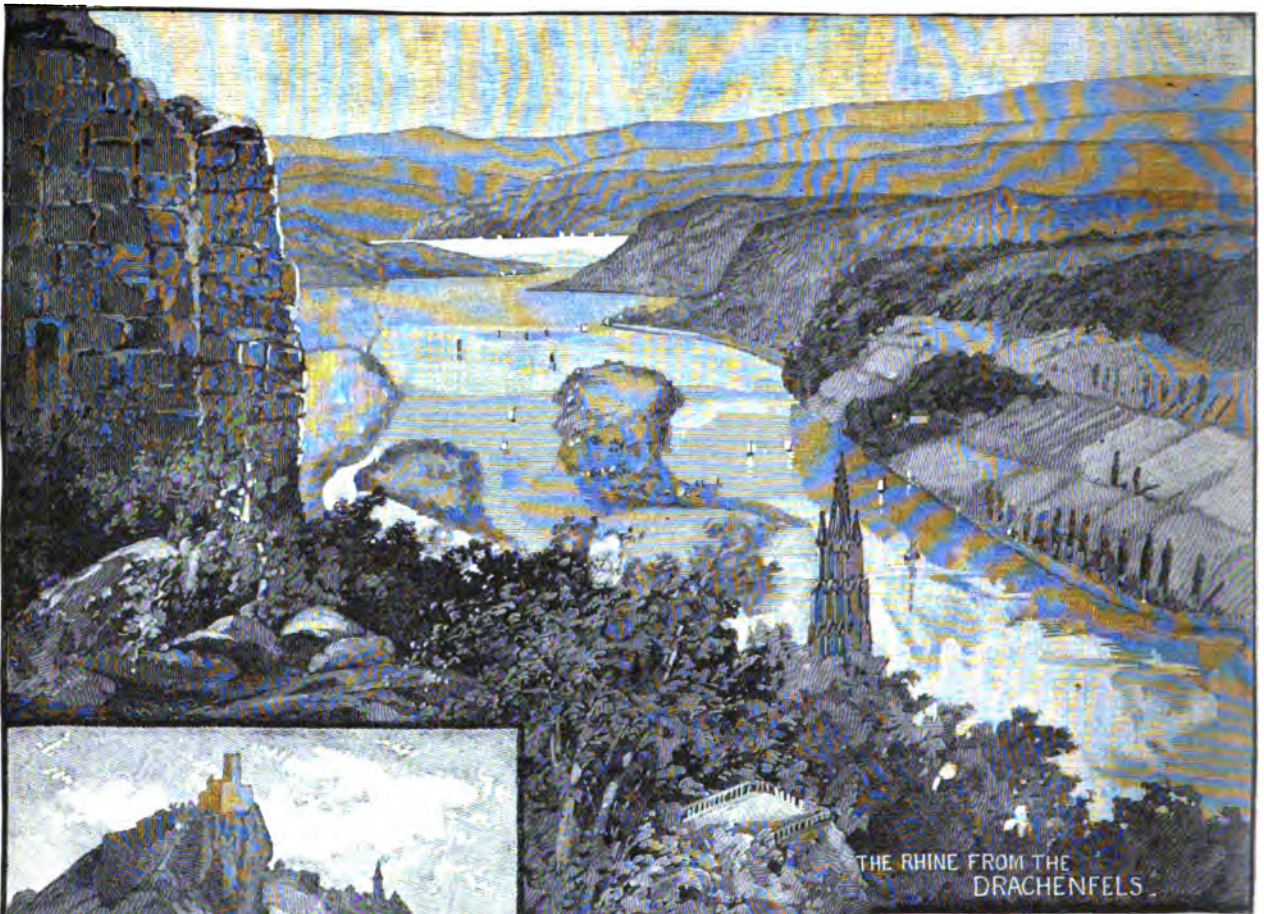
Ireland is noted for its fertile soil and delightful scenery. The best linen in the world is made in Ireland.

For what is London noted?

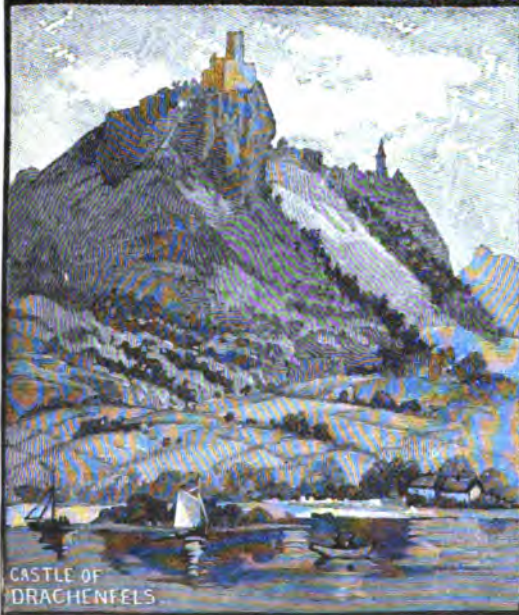
London is the capital of the British Empire. It is the largest city in the world, and the first in commerce.

What other important cities in the British Isles?

Liverpool is the principal seaport. *Birmingham*, *Manchester*, *Leeds*, and *Sheffield* are noted for their manufactures, *Glasgow* for its shipyards, and *Belfast* for its linen factories.



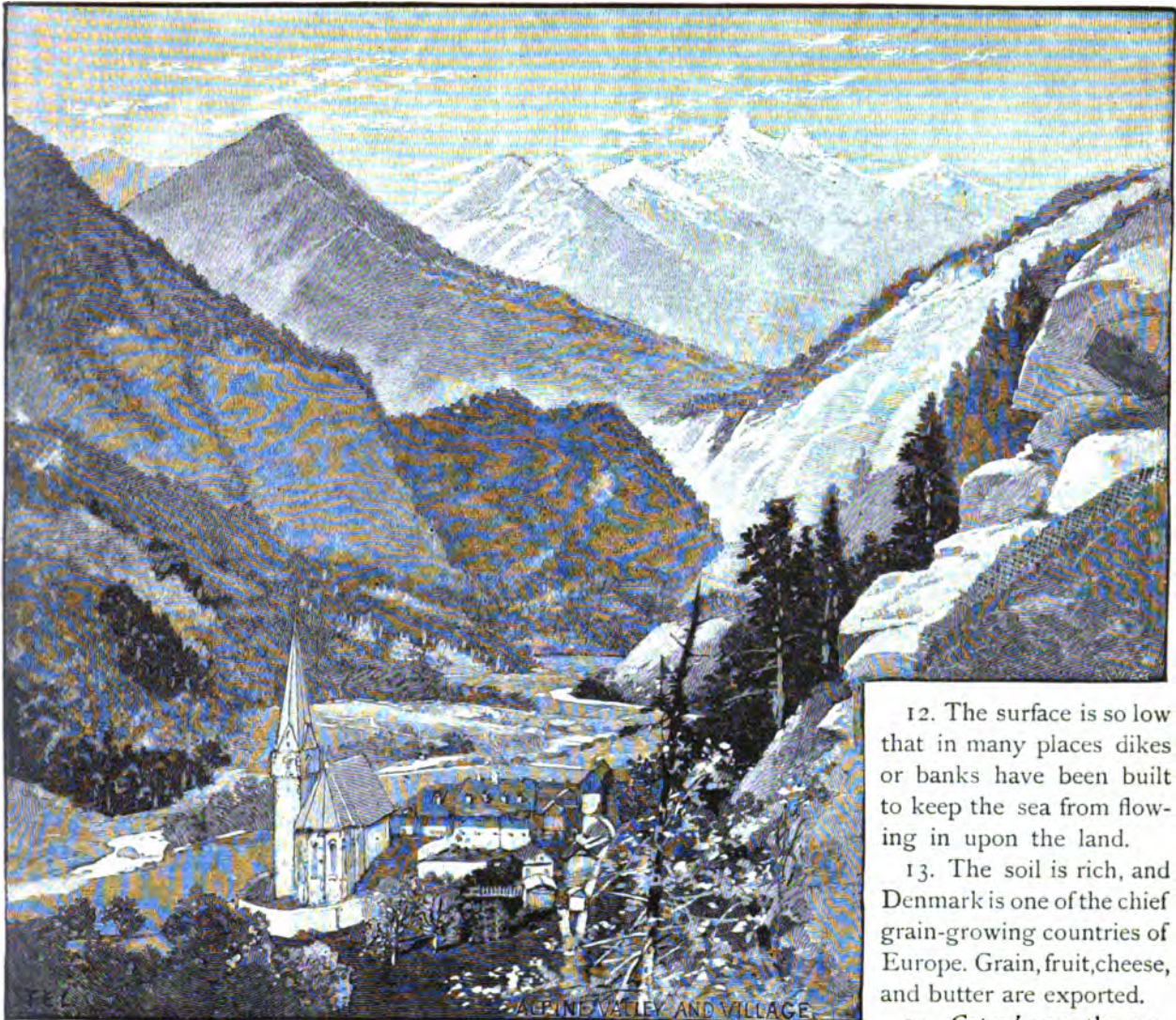
THE RHINE FROM THE
DRACHENFELS



CASTLE OF
DRACHENFELS

NORTHERN EUROPE.

1. **Russia.**—The Russian Empire comprises all the northern part of Europe and Asia. Russia is larger than all the rest of Europe.
2. Most of the surface of Russia consists of great plains called steppes. In the northern part these plains are frozen marshes.
3. The climate is everywhere severe. In the north the winter lasts eight or nine months of the year. There are large forests in the central part. Russia produces every year almost as much grain as all the rest of Europe. Gold, platinum, and copper are mined in the Ural Mountains; petroleum is abundant in the basin of the Caspian Sea.
4. Most of the inland trade is carried on by fairs, and more than a hundred thousand merchants gather every year at the fair of Lower Novgorod.
5. The ruler is called the Czar. His will is absolute, and the people have no voice in making the laws. There are few public schools, and only the rich people are educated.
6. *St. Petersburg* is the capital and largest city. It is farther north than any other large city in the world. *Moscow* has a larger trade in furs than any other city of Europe.
7. **Norway and Sweden.**—Norway and Sweden are together called the Scandinavian Peninsula. They extend farther north than any other part of the mainland of Europe.



RHINE VALLEY AND VILLAGE

8. The western part is a rugged plateau covered with pine forests. The slope to the ocean is scored with deep ravines, called fjords. The eastern part slopes gently to the Baltic Sea. Canals traverse the lowlands in every direction.

9. The people are thrifty and well educated. Farming and fishing are the chief employments. The iron-mines yield an ore that makes the best of steel.

10. *Christiania* is the capital of Norway, and *Stockholm* of Sweden. Both countries are governed by one king.

11. **Denmark.**—The only part of Denmark on the mainland of Europe is a small peninsula extending from Germany. Greenland, Iceland, and the Faroe Islands are colonies.

12. The surface is so low that in many places dikes or banks have been built to keep the sea from flowing in upon the land.

13. The soil is rich, and Denmark is one of the chief grain-growing countries of Europe. Grain, fruit, cheese, and butter are exported.

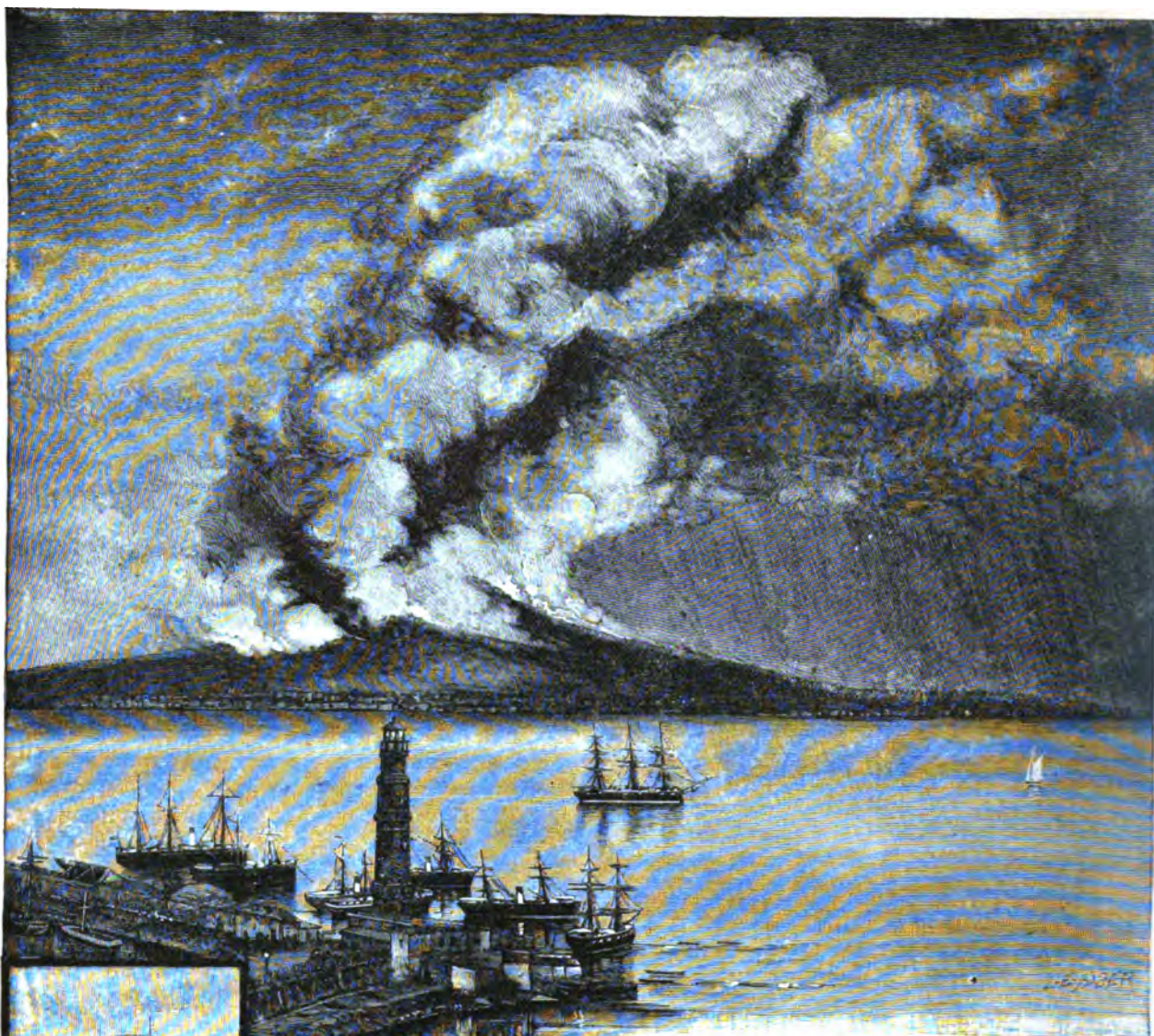
14. *Copenhagen*, the capital, is noted for its art-galleries and museums. It is the principal naval station of Denmark.

15. **German Empire.**—The German Empire is a union of twenty-six German states. Prussia, Bavaria, Saxony, and Wurtemberg are kingdoms. Most of the others are governed by princes. The king of Prussia is the Emperor of Germany.

16. The German people are noted for their thrifty habits and their intelligence. Every child is compelled to attend school, and every youth must serve at least three years in the army.

17. Farming and manufactures are the chief employments. Grain and the sugar-beet are cultivated. The vineyards along the Rhine are famous for the excellent wine which they produce.

18. The valley of the Rhine is celebrated for



ERUPTION OF VESUVIUS.



LEANING TOWER-PISA.

commercial port on the mainland of Europe. *Breslau* (bres'low) is a famous wool market. *Dresden* and *Munich* are noted for their art-galleries.

its historic scenery, and all along its banks are the ruins of castles which were feudal strongholds in the middle ages.

19. In the highlands of South Germany are rich silver-mines. Amber is found along the shores of the Baltic Sea. The largest steel-works in the world are in Essen, Prussia.

20. *Berlin*, the capital of Prussia, is also the capital of the German Empire. *Hamburg* is the chief

21. **The Netherlands.**—The Kingdom of the Netherlands or Holland includes also large possessions in South America, Asia, and Africa. Netherlands means *low land*.

22. A few years since, nearly one-third of this country was covered by the sea. Embankments were built so as to enclose large tracts of land, and then the water was pumped out.

23. The walls are called dikes, and the land they enclose, polders. Everywhere one may see wind-mills pumping the drainage-water back into the sea.

24. The people of the Netherlands are called Dutch. They are noted for their frugal habits and their neatness. The butter and cheese made in Holland are famous for their excellence.

25. *The Hague* is the residence of the king and the court, but the legal capital is *Amsterdam*. The latter is the largest city of the Netherlands.

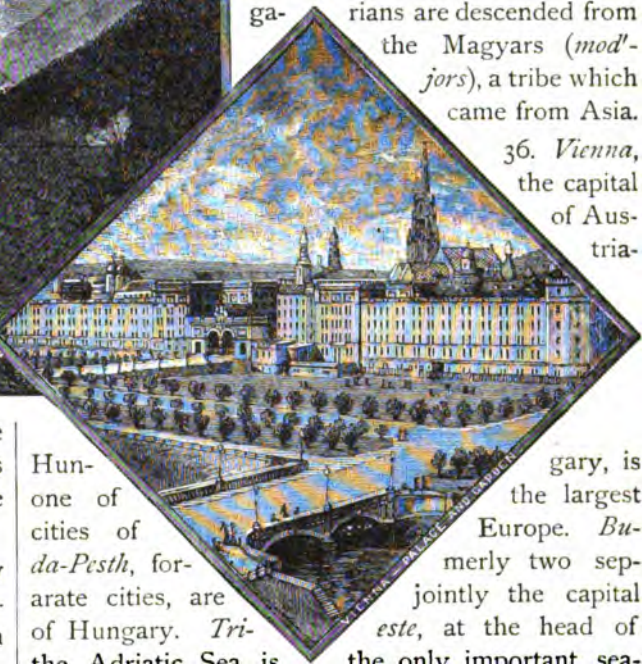
32. The western part is mountainous. Brenner Pass, a defile in the mountains, is the highway between Italy and Austria.

33. The eastern part is one of the chief wheat-producing regions of Europe, and no other region yields a greater supply of wine.

34. There are rich mines of gold, silver, coal, and iron. The salt-mine near Wieliczka (*wie-litch'kā*) is famous as the largest in the world.

35. The people are chiefly of German descent. The Hungarians are descended from the Magyars (*mod'jors*), a tribe which came from Asia.

36. *Vienna*, the capital of Austria-



26. **Belgium.**—The Kingdom of Belgium is the smallest kingdom in Europe. Along the coast it is so low that dikes have been built to keep out the sea at high tide. In the interior it is rugged.

27. Belgium is the most thickly-peopled country in Europe, and one of the most important manufacturing states. Much of the land is covered with forests. The people speak the French language.

28. Farming is carried on in the lowlands, and grain, sugar-cane, and flax are raised. In the highlands coal, iron, and zinc are mined. Cotton- and woolen-mills are scattered all over the kingdom.

29. *Brussels*, the capital, is noted for the manufacture of lace and carpet. Near Brussels is the famous battle-field of Waterloo.

30. *Antwerp* is the seaport of Belgium, and the seat of an extensive foreign commerce. It contains one of the largest cathedrals in the world.

31. **Austria-Hungary.**—The Austro-Hungarian Monarchy consists of the Empire of Austria and the Kingdom of Hungary. Next to Russia it is the largest state of Europe.

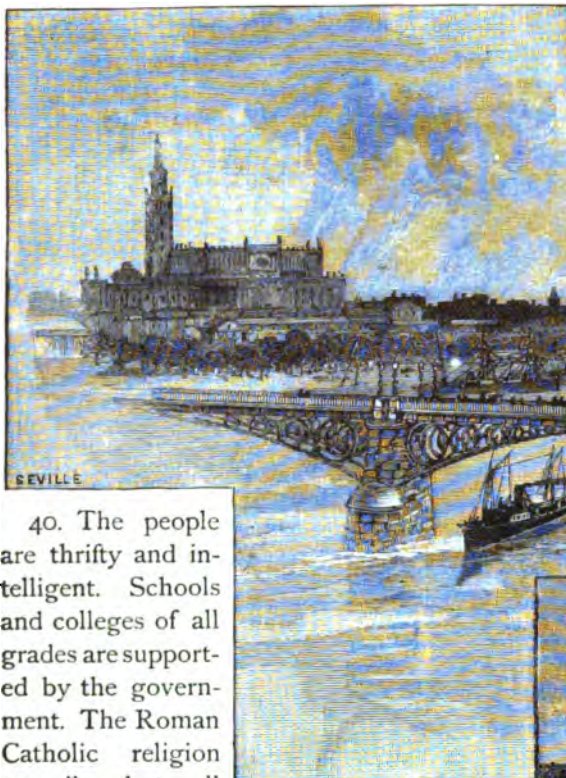
Hungary, is the largest of Europe. *Budapest*, formerly two separate cities, are jointly the capital of Hungary. *Trieste*, at the head of the Adriatic Sea, is the only important seaport of the Austro-Hungarian Monarchy.

SOUTHERN EUROPE.

37. **France.**—The Republic of France is about as large as the Middle Atlantic States. The climate is generally mild. In the south the winters are warm and delightful. In the highlands only are there extremes of heat and cold.

38. In no other country of Europe is farming so thoroughly and carefully carried on. In the north grain is cultivated; the southern part is famous for wine, olives, and oranges.

39. The French excel in the manufacture of silk and woolen goods and fine pottery. French silks and bric-à-brac are sold in all parts of the world.



40. The people are thrifty and intelligent. Schools and colleges of all grades are supported by the government. The Roman Catholic religion prevails, but all forms of worship are permitted by law.

41. *Paris* is the capital. It is the foremost city in art, science, and fashion, and next to London it is the largest city in the world. *Lyons* is celebrated for its silk manufactures. *Marseilles* is the principal seaport.

42. **Switzerland.**—The Republic of Switzerland lies in the heart of the Alps, and includes nearly all their highest summits. All the streams are mountain-torrents flowing from glaciers. Only the valley-lands can be cultivated.

43. The Swiss people are noted for their intelligence and love of independence. The French language is commonly spoken. Dairy-farming is the chief employment. The finest of watches and jewelry are made in Switzerland.

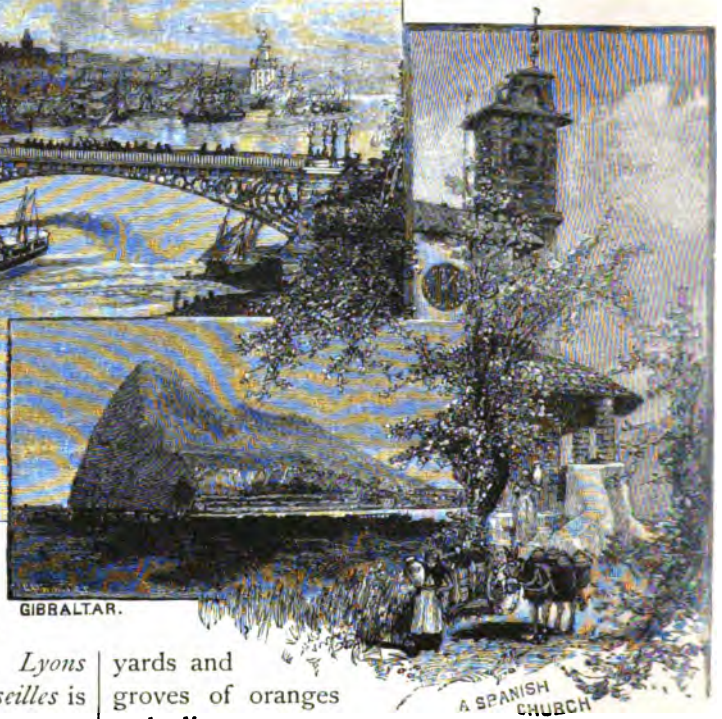
44. *Berne* is the capital. *Geneva*, the largest city, is celebrated for its watch-factories. *Basel* contains a famous university.

45. **Italy.**—The Kingdom of Italy includes the islands of Sicily and Sardinia. It is about twice the size of Pennsylvania.

46. The valley of the Po River is one of the most

fertile parts of Europe, and one of the chief grain-growing and wine-producing regions. Six crops of hay may be taken from the meadows every year.

47. The southern part is mountainous, but there are multitudes of fertile spots covered with vine-



yards and groves of oranges and olives.

48. In this part of Italy are Vesuvius and Etna, two of the most famous volcanoes. In the year 79, an eruption of Vesuvius buried the cities of Herculaneum and Pompeii (*pom-pā'ē*).

49. *Rome*, the capital of Italy, was formerly the capital of one of the greatest empires in the world. It is the residence of the Pope, the head of the Roman Catholic Church.

50. *Naples* is the largest city and chief seaport. *Milan*, the largest city of Northern Italy, contains one of the finest cathedrals in the world. *Venice* is built on seventy-two small islands in the sea. Most of its streets are canals.

51. **Spain and Portugal.**—Taken together these two kingdoms form the Spanish Peninsula. They consist of a high plateau crossed by ranges of mountains. Both kingdoms have large colonies.

52. The climate is delightful. The vineyards along the Douro River produce the famous port wine. Wine, fruits, cork, and olive-oil are exported. The mines produce quicksilver, lead, and iron.

53. *Madrid* is the capital of Spain, and the largest city. *Barcelona* is the chief seaport. *Lisbon* is the capital and chief seaport of Portugal.

54. **Turkey and the Balkan States.**—Turkey is the chief division of the Turkish Empire. It has part control over Bulgaria, East Roumelia, and several small provinces.

55. The ruler is called the Sultan, and the laws are founded on the Koran or Mohammedan bible. The Turks are of Asiatic descent.

56. Cattle- and hog-raising is the chief pursuit. Silk, fine leather, and carpets are manufactured, and, with opium and tobacco, are the chief exports.

57. *Constantinople*, the capital, is noted for its beautiful mosques or churches. *Sofia* is the capital of Bulgaria.

58. **Roumania, Servia, and Montenegro** formerly belonged to Turkey. The people are of Christian belief, and became independent of the Turks who for this reason oppressed them. *Bucharest*, *Belgrade*, and *Cettinje* are their capitals.

59. **Greece.**—The Kingdom of Greece forms the southern part of the Balkan Peninsula. It is about half the size of Pennsylvania. The Greeks are descended from a people who founded one of the most powerful empires in the world.

60. Currant-grapes and oranges are exported. Commerce is the leading pursuit. *Athens*, the capital, was formerly one of the most famous cities in the world.

REVIEW LESSON.

Name the countries of Continental Europe. Give the capital, largest city, and commercial outlet of each.

What are the chief products of Europe?

The chief products of Northern or Low Europe are grain and fine cattle; of Southern or High Europe, wine, fruit, and silk.

For what is Russia noted?

Russia is larger than all the rest of Europe, and produces nearly as much grain as all the other states combined.

What is said of Norway and Sweden?

Norway and Sweden extend farther north than any other inhabited part of the Eastern Continent. The Swedish iron ore is the best in the world.

For what are Denmark, the Netherlands, and Belgium noted?

Much of their surface has been reclaimed from the sea. They are famous for the grain, butter, and cheese produced. Belgium is the most thickly peopled country in Europe.

What is said of the German Empire?

The German Empire is a union of four kingdoms and twenty-two other states. The people are educated. The valley of the Rhine is noted for its vineyards.

What is said of Austria-Hungary?

Austria-Hungary comprises the Empire of Austria and the Kingdom of Hungary. It excels in the production of gold, silver, wine, and salt.

For what is Italy noted?

Italy is noted for its wines and its works of art. The valley of the Po is one of the most fertile regions in the world.

What is said of Switzerland?

Switzerland is situated in the heart of the Alps. Swiss watches and jewelry are famous.

In what does France excel?

France is one of the foremost states of Europe in agriculture, and in the manufacture of silk and fine pottery.

For what are Spain and Portugal famous?

Spain and Portugal are celebrated for their wine, fruit, and olive-oil. Spain is the first country in the production of quicksilver and cork.

What is said of Turkey and Greece?

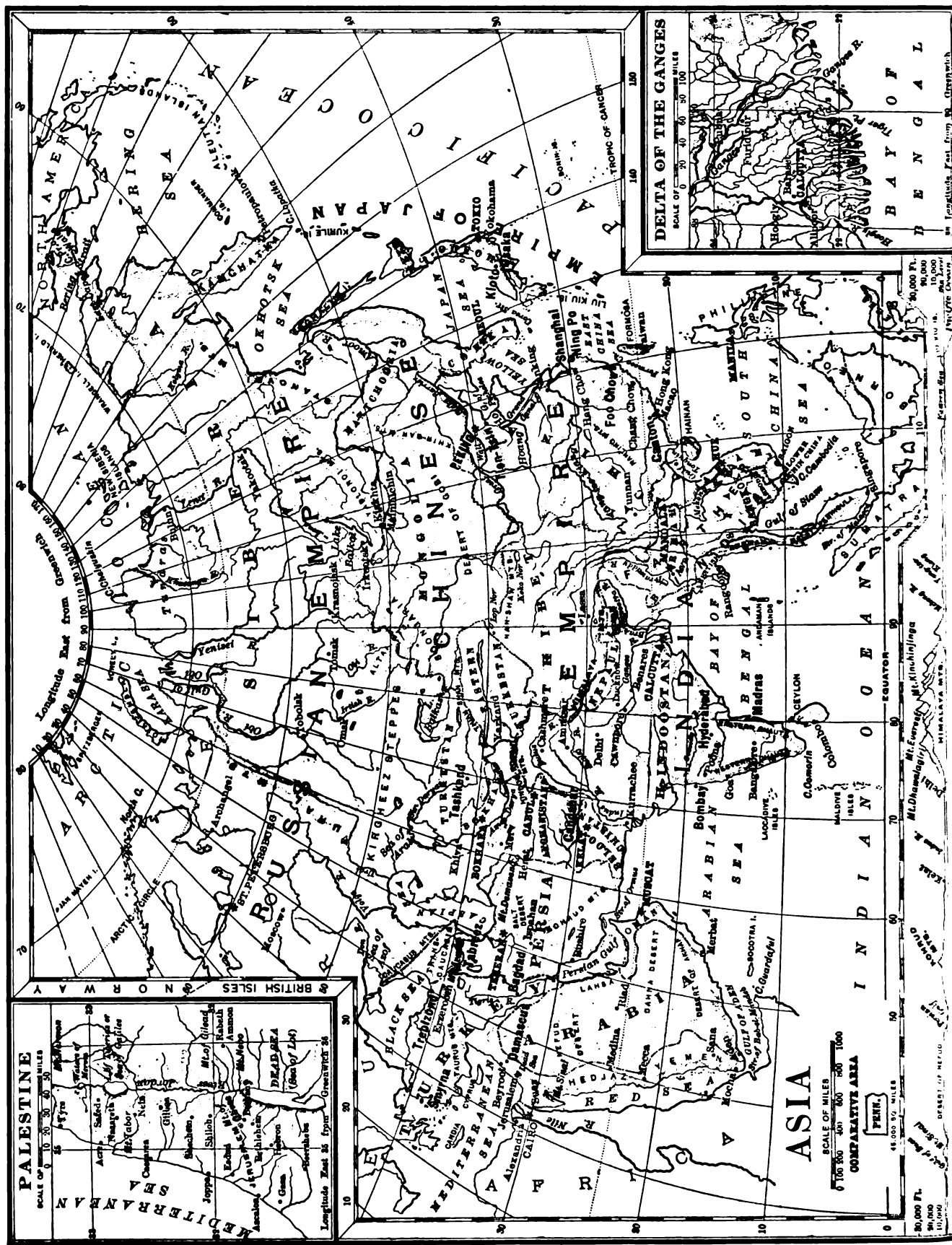
The Greeks are chiefly merchants and sailors. Turkey is famous for its tobacco, leather, and carpets.

What are the principal cities of Northern Europe?

Berlin and Vienna are noted for their universities and manufactures. Hamburg and Amsterdam are important seaports. St. Petersburg is farther north than any other large city.

What are the leading cities of Southern Europe?

Paris, next to London, is the largest city in the world. Rome is noted for its ancient history. Naples and Marseilles are important seaports.



ASIA.

QUESTIONS ON THE MAP.

What ocean north?—east?—south? What grand divisions west? What seas on the eastern coast? What bay indents the southern coast? What sea between Arabia and India? What seas on the western coast? What strait between Asia and North America? Name two peninsulas that project from the southern coast. What is the northern cape of Asia?—the eastern?

What three large rivers flow into the Arctic Ocean? Name three whose waters reach the Pacific Ocean—three that flow into the Bay of Bengal.

What mountains between Tibet and India?—between Hindoostan and Eastern Turkestan?—between the Chinese Empire and Siberia? *Ans.*—*The ranges of the Altai Mountains.* What and where is the highest peak in the world? *Ans.*—*Mt. Everest in the Himalaya Mountains is 29,002 feet above the sea.*

Siberia.—What peninsula extends from the northeastern part of Siberia? What island east? What lakes and sea in the southern part? What mountains form part of the northwestern boundary? What river flows into the Sea of Aral? What large city in the southwestern part? What cities near Lake Baikal?

Chinese Empire.—What country north? What strait between China and Japan? What seas and gulf off the eastern coast? What two islands southeast? What desert in the northern part? What mountains on the northern boundary?—on the southern? What large rivers in China? What and where is the capital? Name four seaports on the eastern coast. What is the capital of Corea?

India.—Of what does India consist? *Ans.*—*India con-*

sists of the peninsulas of Hindoostan and Farther India. What waters southeast?—south? What empire north?—countries west? What island southeast of Hindoostan? What is the capital of British India? *Ans.*—*Calcutta.* What is the capital of Burmah?—Siam?—Anam? What seaport on the west coast of Hindoostan?—on the east coast? **Persia; Afghanistan, and Beloochistan.**—Of what does the surface of these countries consist? *Ans.*—*It is a high plateau called the Plateau of Iran.* What countries and what sea north? What waters south? What mountains in Afghanistan? What noted peak in Persia and Turkey? What is the capital of each country? What city in the north of Persia?

Turkey.—What sea north?—country east?—seas west? What mountains in the north? What river flows into the Persian Gulf? What sea southeast of Jerusalem? (*See vignette.*) What river flows into the Dead Sea? What mountain north of the Red Sea? What cities on the Mediterranean Sea?—on the Black Sea? What city northeast of Jerusalem?

Arabia.—Of what is Arabia composed? *Ans.*—*A number of petty states.* What is the character of the surface? What country of Arabia is south of Persia? What gulf is northwest of Oman? What strait between Oman and Persia? What seaports near the Gulf of Aden? What is the capital of Oman?

Japan.—Of what does the Empire of Japan consist? *Ans.*—*It is a chain of volcanic islands.* What waters separate them from the mainland? Name the largest island. Name two groups. What is the capital? What is the chief seaport? *Ans.*—*Yokohama.*

line. Large arms of the sea indent the southern coast, and a long chain of mountainous and volcanic islands nearly shuts in the eastern.

3. The northern part of Asia is a vast plain which slopes to the Arctic Ocean.

Malaysia.—(*See also Map of Australia, p. 118.*) Of what is Malaysia composed? *Ans.*—*The continental islands southeast of Asia.* Name the four largest. *Ans.*—*Borneo, Java, Sumatra, and Celebes.* What group northeast of Borneo? What strait between Sumatra and Java?—between Borneo and Celebes? What seas are united by Macassar Strait?

What mountain in the northern part of Borneo? What cape at the northern point of Sumatra? What sea between Borneo and Java? What is the capital of Java? What seaport on the southwestern coast of Sumatra?—two seaports in Borneo? What is the capital of the Philippine Islands? What seaport in Celebes Island?

REVIEW.

Where is Bering Sea?—Okhotsk Sea?—Japan Sea?—Yellow Sea?—South China Sea?—Gulf of Siam?—Bay of Bengal?—Arabian Sea?—Persian Gulf?—Gulf of Aden?—Strait of Bab-el-Mandeb?—Red Sea?

Describe the Obi (*o'le*) River—Yenisei (*yen-e-sai'e*)—Lena—Amoor'—Hoang Ho—Yang-tse-Kiang—Mekong—Brahmapootra—Ganges—Indus—Tigris—Sir Darya (*dar'ya*).

Where are the Stanovoy Mountains?—Klingan?—Nanking—Himalaya?—Hindoo Koosh?—Taurus? Where is Mt. Everest?—Mt. Ararat?—Mt. Sinai?

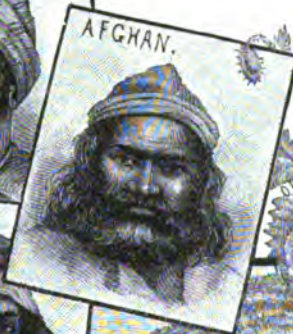
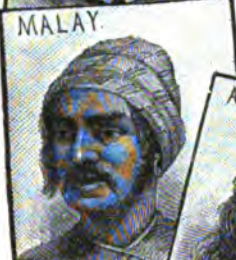
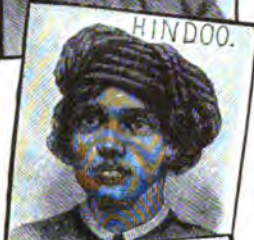
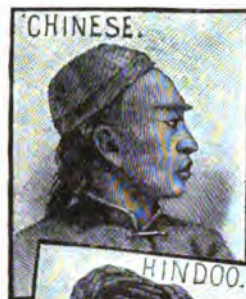
Where is Tashkend?—Irkootsk?—Peking?—Shanghai?—Canton?—Seoul (*se-ool'*)?—Tokio?—Yokohama?—Mandalay?—Calcutta?—Bombay?—Madras?—Cabal (*kaw'ble*)?—Tcheran?—Mocha?—Trebizond?—Smyrna?—Muscat?—Manila?

Along the shore of the ocean it is a frozen marsh covered here and there with club moss.

4. The central part contains the ranges of the lofty Himalaya Mountain System. The Himalaya Mountains proper are the highest

1. Asia is the largest grand division. It reaches from the Arctic Ocean nearly to the equator. From north to south it is about five thousand miles long, and from east to west, nearly six thousand miles.

2. Asia has a long and broken coast-



in the world. One of the peaks, Mount Everest, is five and one-half miles high. There are several other peaks about five miles in height.

5. The plateaus of Asia also surpass all others in height. The Plateau of Thibet is more than three miles high. Arabia, and much of the region north of the Arabian Sea, are high plateaus.

6. The ranges of the Himalaya System enclose the largest inland basin in the world. A large part of this region is covered with shifting sand-dunes and dotted with salt lakes.

7. The basin of the Caspian Sea is below the sea-level, and the Dead Sea is situated in a deep gorge 1300 feet below the level of the ocean. It is the deepest depression known.

8. There are many large rivers in Asia, but none are so long nor so large as some of the rivers of the Western Continent. The Ganges, the Amoor, and the Yang-tse-Kiang are the most important.

9. Because Asia extends through such a wide latitude, there

is every variety of climate. Northern Siberia is the coldest, and Arabia the hottest country known. In the south there are alternate wet and dry seasons.

10. The grains and most of the tree-fruits used for food, as well as the sugar-cane, the banana, the cotton-plant, and rice, came from Asia. It also produces most of the spices and nearly all the tea.

11. The horse, ox, goat, sheep, and nearly all of our domestic animals came from Asia. The lion, tiger, elephant, and nearly all of the largest and fiercest animals known are found in Southern Asia.

12. Gold, silver, platinum, copper, and lead are among the chief mineral products. India yields diamonds and other precious stones; in China porcelain clay and coal abound. Around the Caspian Sea petroleum is abundantly produced.

13. Asia is the birth-place of the human race, and more than one-half the people on the earth live in this grand division.

14. They belong to three races. The Aryan and the Semitic races live in the south. The Malays in the southeast, and the Mongolians in China and Siberia, belong to the Turanic race.

15. **Russia in Asia.**—The Russian territory in Asia includes Siberia and Turkestan. It comprises all the northern part of Asia. Most of the surface consists of level plains called steppes.

16. There are a number of Russian settlements, and many of the people are prisoners who have been exiled from Russia.

17. Most of the trade is carried on by caravans and fairs. The mines of gold and platinum are owned by the government and worked by convict prisoners. Grain is cultivated along the Amoor River.

18. *Tashkend*, in Turkestan, is the largest city. *Irkoetsk* and *Kiaklita* are centres of caravan trade.

19. **The Chinese Empire.**—The Chinese Empire embraces Manchooria, Mongolia, Soongaria, East Turkestan, Thibet, and China Proper.

20. The surface consists largely of high plateaus and desolate wastes; but the southeastern part, or China Proper, is a succession of fertile plains and valleys. It includes the islands of Formosa and Hainan. The great wall upon the north was built many hundred years ago to keep out the warlike Tartars.

21. The Chinese are intelligent and educated, but

not progressive. Their customs and language have changed but little in three thousand years.

22. Tea and rice, the most valuable products, are exported to all parts of the world. The manufacture of silk and gunpowder was carried on first in China.

23. *Peking*, the capital, is one of the largest cities in Asia. *Canton* and *Shanghai* are the chief seaports. *Hong Kong* belongs to Great Britain.

24. **Corea.**—The peninsula of Corea was for many years a tributary province of China, but is now independent. *Seoul* is the capital.

25. **India.**—British India comprises Hindoostan, Burmah, and settlements along the Straits of Malacca. Farther India comprises Anam, Siam, the Malay Peninsula, and several European colonies.

26. **British India** is half as large as the United States, and the Himalaya Mountains are as far from Cape Comorin as Florida is from Hudson Bay.

27. The southern part is a region of plateaus. The northern part contains the plains of the Ganges, one of the most thickly peopled parts of the earth.

28. The people are divided into several castes or classes of society. The Brahmans are of the highest caste, and from them are chosen the priests. The soldiers are of the second, the tradesmen and farmers of the third, and laborers of the fourth.

29. The government is in the hands of the English, and a governor-general is appointed by the ruler of Great Britain.

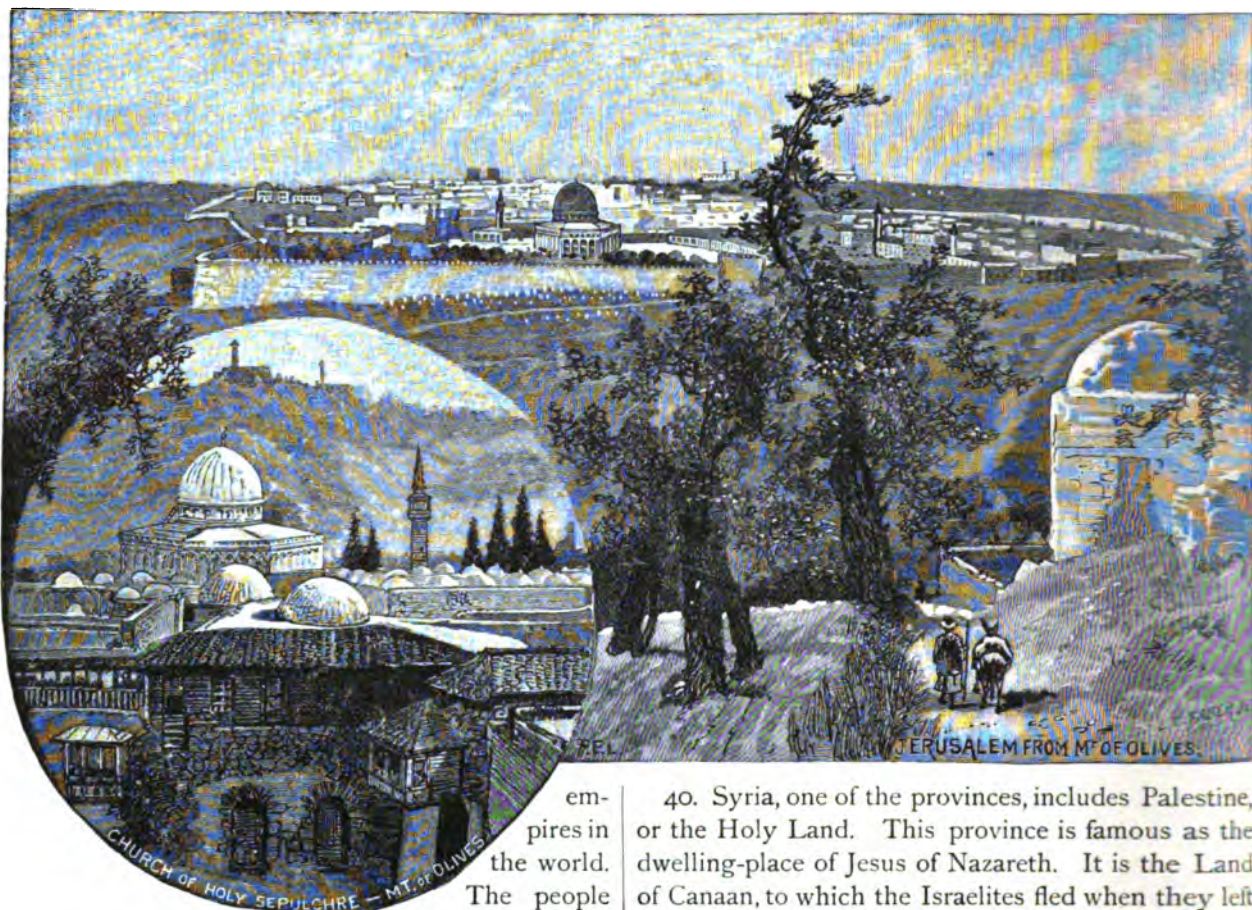
30. Wheat, rice, and cotton are the chief products, and it is because of these that India is the most valuable possession of Great Britain.

31. *Calcutta*, the capital, is the largest city. Railways connect it with *Bombay* and *Madras*, the chief seaports.

32. **Farther India** is sometimes called Indo-China. Siam is a native kingdom. Burmah is now a British possession. Anam and most of the other states are under French control. Siam is the most progressive state of Farther India. Railways have been built and schools established.

33. Rice, teak wood, and spices are exported. *Bangkok*, the capital of Siam, is the most important city. *Singapore* is one of the largest spice markets in the world.

34. **Persia** was formerly one of the most powerful



empires in the world. The people have no voice in the government, and the will of the Shah or ruler is the law.

35. **Persia** is best known for its silks, camel's-hair shawls, and carpets, which are among the finest made. Herds of fine sheep are among the chief sources of wealth.

36. **Tehran** is the capital. **Tabreez** is situated on the caravan-route between Russia and India. It is the chief centre of trade.

37. **Afghanistan** is of importance because all the caravans between Europe and India must go through its mountain-passes. The people are Mohammedans. They are brave, but generally ignorant and treacherous. **Cabul** is the capital.

38. **Beloochistan** has no organized government. The people are mixed tribes whose only wealth is their cattle, sheep, and goats. **Kelat** is the capital.

39. **Turkey in Asia**.—The Turkish possessions in Asia are chiefly between the Black and Mediterranean Seas, and along the shores of the Red Sea.

40. **Syria**, one of the provinces, includes Palestine, or the Holy Land. This province is famous as the dwelling-place of Jesus of Nazareth. It is the Land of Canaan, to which the Israelites fled when they left Egypt. It was once very fertile, but it is now barren and desolate.

41. Grain, figs, tobacco, carpets, and silk goods are the chief exports. Most of the trade is carried on by Greek merchants. **Smyrna** is the chief seaport of Asia Minor. **Damascus** and **Jerusalem** are among the oldest cities in the world.

42. **Arabia**.—Arabia is a high plateau. The greater part is a desert, with here and there fertile spots. Most of the country is made up of small independent states.

43. Arabia is famous for fine horses, coffee, and dates. It is also noted as the birth-place of Mohammed, the founder of the Mohammedan religion.

44. **Muscat** and **Mocha** are centres of trade. **Mecca** is the holy city of the Mohammedans.

45. **Japan**.—The Empire of Japan consists of a chain of islands extending along the coast of Asia a distance of more than two thousand miles.

46. The Japanese are noted for their intelligence. No other people in the world have made such rapid

progress in education, science, and art as have the Japanese during the past few years. Railways and telegraph lines connect the principal cities.

47. The ruler is called the Mikado. He makes the laws, and carries out such of them as are approved by a deliberative body called the Imperial Diet.

48. Rice and tea are the most important products; silk and porcelain are the chief manufactures. Trade is carried on chiefly with the United States. *Tokio* is the capital, and *Yokohama* is the chief seaport.

49. **Malaysia.**—The islands of Malaysia are parts of the two great chains which are near the mainland of Asia. They contain most of the active volcanoes on the earth.

50. The Sunda Islands, Celebes, and Borneo are

Dutch possessions. The Philippine Islands belong to Spain. Borneo and the Philippine Islands, however, both contain independent, native states.

51. The forests of Borneo and Sumatra yield camphor and gutta percha; the low coast belt, rice and cotton. Java is more thickly peopled than any other part of Asia, and contains more active volcanoes than any other island in the world.

52. The island of Banca yields the best of tin, and the Philippine Islands the finest of hemp. Gold and diamonds are found in Borneo.

53. *Batavia* is the capital of the Dutch possessions. It is the centre of trade of the Dutch East Indies. *Manila*, the largest city of the Spanish possessions, has a large European population. *Macassar*, the chief town of Celebes, is a Dutch settlement.

REVIEW LESSON.

Name the leading divisions of Asia. Give the capital and largest city of each.

Describe the surface of Asia.

The northern part is a vast plain; the central part is an inland desert region; the southern part consists of rugged peninsulas.

What and where are the principal highlands?

The Himalaya Mountain System form the chief highlands. They enclose the largest inland basin of the earth.

What are the principal rivers of Asia?

The Obi and Yenesei are the chief rivers of the north; the Yang-tse and Amoor, of the east; and the Ganges and Bramapootra, of the south.

What is said of the plants and animals of Asia?

The grains, fruits, and most of the animals and plants useful to man came from Asia. It is the home of the largest and fiercest of animals.

What is said of the Russian possessions in Asia?

The Russian possessions include all of the northern part of Asia. Many of the people of Siberia are exiled prisoners.

For what is the Chinese Empire noted?

The Chinese Empire is the most populous and one of the oldest countries in the world. It is first in the production of tea and silk.

What is said of India?

British India excels in the production of wheat, rice, and cotton. Farther India yields teak wood and spices.

In what do the countries of the Iran Plateau excel?

Persia is noted for silk and camel's-hair goods. Afghanistan is the highway between Europe and India.

For what is Arabia famous?

Arabia is famous for its coffee and fine horses.

What is said of the island divisions of Asia?

The Japanese are the most progressive people of Asia. The islands of Malaysia yield more spices than any other part of the world.

For what is Turkey in Asia noted?

Turkey in Asia includes Palestine or the Holy Land, the home of the Israelites and the birth-place of Jesus the Christ.

Name the important cities of Asia.

Peking and Canton are the largest cities of Asia; Calcutta, Bombay, and Madras are the chief seaports.

What other important cities?

Tokio, Manila, and Batavia are the chief cities of the islands, and Smyrna of Western Asia.



DELTA OF THE NILE

AFRICA

PART OF SOUTHERN AFRICA

STATUTE MILES
0 100 200 300 400 500 600 700 800 900 1000 1100 1200

Longitude 10 West 20 West 30 West 40 West 50 West 60 West 70 West 80 West 90 West 100 West 110 West 120 West 130 West 140 West 150 West 160 West 170 West 180 West
Latitude 30 North 20 North 10 North 0 Equator 10 South 20 South 30 South 40 South 50 South 60 South 70 South 80 South 90 South

AFRICA.

QUESTIONS ON THE MAP.

In what zones is Africa situated? What is its extent from north to south?—from east to west? What ocean east?—west? What sea north?—northeast?

What isthmus joins Africa to Asia? *Ans.*—*The Isthmus of Suez.* Is the greater part of Africa north or south of the equator? What capes at the southern extremity of Africa?—at the eastern extremity?—at the western? What is the northern cape? What large island southeast? What channel separates it from the mainland? What groups of islands west and northwest? What small group east of Madagascar?

In what part of Africa are most of the lakes? Name the four largest in this group. What lake in the northern part of Soudan?

What mountains in the northwest?—mountains in Upper Guinea?—in the extreme south? What two mountain-peaks east of Victoria Nyanza? In what part of Africa do most of the rivers rise? What large river flows into the Mediterranean Sea?—into the Gulf of Guinea?—into the Atlantic Ocean?—into Mozambique (*mo zám-beck*) Channel? What river drains the largest area? *Ans.*—*The Congo River.* What is the longest river? *Ans.*—*The Nile.*

Barbary States.—Name the Barbary States. *Ans.*—*Morocco, Algeria, Tunis, and Tripoli.* What sea north? What is the country south of the states called? What mountains in the northwestern part? What is the capital of Morocco? What is the capital of Algeria?—of Tunis?—of Tripoli?

Egyptian Possessions.—What sea north?—east?

1. Africa is the only grand division of the Eastern Continent which extends to the south temperate zone. It is a peninsula joined to Asia by the narrow Isthmus of Suez. Its length and breadth are each about five thousand miles. The coast is very regular, and there are no good harbors.

2. Africa is a vast plateau bordered by high mountain-ranges. The loftiest high-

What large river flows through the eastern part of Egypt? What canal joins the Red Sea to the Mediterranean Sea? What and where is the capital? What seaport northeast of Cairo? What towns at the ends of the Suez Canal?

Abyssinia.—What river forms part of the southern boundary? Of what lake is it the outlet? What is the capital of Abyssinia? What is its nearest seaport?

Soudan.—What region north? What river flows through the central part of Soudan? What mountains in the southwestern part? What lake in the north? Of what is Soudan composed? *Ans.*—*It is composed of petty, independent states.*

Guinea Coast.—Into what two parts is the Guinea coast divided? *Ans.*—*Into Upper Guinea and Lower Guinea.* What Negro colony and republic southeast of Senegambia? *Ans.*—*Sierra Leone (la-o'na) and Liberia.* What is the capital of Liberia? What large seaport in Lower Guinea?

Congo State.—What does the Congo State comprise. *Ans.*—*It comprises most of the basin of the Congo River.* What lake on the eastern boundary? What river forms part of the western boundary? What town near the mouth of the Congo?

Zanzibar Coast.—What cape is the southern limit of the Zanzibar coast? What river is the northern limit? What and where is its capital?

Cape Colony.—What river forms part of the northern

lands are on the eastern border, and their highest peak, Mount Kilima 'Njaro, is nearly eighteen thousand seven hundred feet above the sea-level.

3. A sharp bend of the western coast ranges gives form to the Gulf of Guinea. The Atlas Mountains extend along the northern, and a succession of high table-lands along the southern coast.

boundary? What mountains in Cape Colony? What is the capital of Cape Colony?—of Natal?

South African Republic.—What river forms the northern boundary? What and where is the capital?

Orange Free State.—What river between Orange Free State and Cape Colony? What is the capital?

REVIEW.

Where is Morocco?—Algeria?—Tunis?—Tripoli (*trip'-o-lee*)?—Egypt?—Abyssinia?—Senegambia?—Congo State?—Zanzibar?—Cape Colony?—South African Republic?—Orange Free State?—Madagascar?

Where is Cape Blanco?—Guardafui (*gard-á-fue*)?—Agulhas (*a-gool'yás*)?—Good Hope?—Verde?—Gulf of Aden (*á'den*)?—Bight of Biafra?—Gulf of Guinea?—Mozambique Channel?—Red Sea?

Where are the Atlas Mountains?—Cameroons Mountains?—Kong Mountains? Where is Mt. Kenia?—Mt. Kilima 'Njaro?

Where is Lake Tchad?—Victoria Nyanza (*n'yán'-sd*)?—Nyassa (*n'yá'sá*)?—Tanganyika (*tán-gán-yé-ká*)? Describe the Nile River?—Zambesi River?—Orange River?—Congo River?—Niger River.

Where is Cairo?—Alexandria?—Port Said (*á-é-é'd*)?—Suez?—Zanzibar?—Pretoria?—Pietermaritzburg?—Cape Town?—Bloemfontein?—St. Paul de Loanda?—Monrovia?—Abomey?—Fez?—Morocco?—Algiers?—Tunis?—Tripoli?—Tanana'ribo?—Port Louis?

4. The Nile, Niger, and Congo Rivers drain the greater part of Africa. The Nile is the longest river. Its valley is only a few miles wide, and for more than a thousand miles the river has not a single branch. In summer it overflows the whole valley.

5. The Congo drains the greater part of Central Africa. The Niger is the great river of Western Africa, and many steamers trade



with the towns along its banks. The Orange is the chief stream of Southern Africa.

6. The lakes rank with those of North America in size. Lake Victoria is thought to be larger than Lake Superior. Lake Tchad is in an inland region. It is a small lake in the dry season, but during the rainy season it spreads over a vast extent of country, and overflows into the desert.

7. The climate is very hot along the coast and in the deserts. In the high equatorial belt, however, it is mild, and this region is well watered and fertile. The low coast belt is unhealthy. The region which is nearest the equator is not the hottest part, however, because it is high land.

8. The date-palm is found in the northern part and in the oases of the Great Desert. The forests of the central part abound in teak, ebony, and rosewood. The immense baobab-tree is also common in the central region. The trees yielding gum-arabic and india-rubber are abundant.

9. The elephant, rhinoceros, hippopotamus, zebra, and gnu or horned horse are all found



STREET SCENE—CAIRO.

in Africa. Antelopes are abundant, and there are more species of hoofed animals in this grand division than in any other part of the world.

10. Ostriches are found chiefly in South Africa. In the north the camel is of very great service, as it is the only beast of burden that can cross the desert lands.

11. Gold is found in the west and south. The diamond-fields in South Africa yield more diamonds than all the other diamond-fields in the world.

12. It is thought there are about two hundred million people in Africa, most of whom belong to the Hamitic or Negro race.

13. There are many people of the Semitic race in the north and east. The original Egyptians, or Copts, are thought to belong to the Aryan race. South Africa contains many European settlements.

NORTHERN AFRICA.

14. Northern Africa includes the Barbary States and the Egyptian countries.

15. **The Barbary States.**—The Barbary States

are Morocco, Algeria, Tunis, and Tripoli. They extend along the Mediterranean Sea.

16. North of the Atlas Mountains this region is fertile; south of these ranges it is very dry and hot. The natives are mostly Arabs, Moors, Berbers, and Jews. There are many French merchants and traders. Millet, barley, dates, and wool are the principal products. There is a large caravan trade between the Barbary States and the Soudan.

17. **Morocco** is a little larger than France. It is an absolute monarchy, ruled by a Sultan. The manufacturing of morocco leather and of red caps are important industries. *Fez*, the capital, and *Morocco* are the principal cities.

18. **Algeria** is the largest colonial possession of France. The esparto grass which is used in England for paper-making is one of the leading products. *Algiers* is the capital and chief city.

19. **Tunis** is ruled by Turkish officers who are under French control. The hilly districts have large olive groves, and the lowlands are covered wi'

date-plantations. Precious or pink coral is found in great quantities along the coast. *Tunis* is the capital and seaport.

20. **Tripoli** includes the oasis of Fezzan and the district of Barca. It is a Turkish province. *Tripoli* is the capital.

21. **The Egyptian Possessions** include Egypt, and, nominally, Nubia, Darfoor, and the Egyptian Soudan. Egypt is subject to Turkey.

22. The Nile River flows through these countries, and in its valley are the fields of rice, wheat, millet, and cotton which are made fertile by the annual overflow of the river.

23. The people are mainly Copts, Arabs, and Negroes. In Lower Egypt the laborers are called fellahin (*fel-lä-cen'*), and are little better than slaves. The wealthy people are generally educated.

24. The Suez Canal between the Mediterranean and Red Seas is the chief highway of travel between Europe and India. The larger cities are connected by railways.

25. *Cairo* is the capital. *Alexandria* is the chief seaport. *Khartoom*, the largest town of the Egyptian Soudan, is a centre for river and caravan trade.

26. **Abyssinia** has a surface of high mountains and deep valleys. Lake Dembea, shut in by mountains, is the source of the Blue Nile. A few of the people are Christians, but most of Abyssinia is inhabited by tribes of savage Mohammedans.

27. Cotton, millet, and sugar-cane are raised. Coffee is found in a wild state. *Gondar* is the capital. *Massowah*, a seaport in Egyptian territory, is the only outlet of trade.

CENTRAL AFRICA.

28. Central Africa includes Soudan, the Congo State, and a part of the Guinea and Zanzibar coasts.

29. **Soudan** is the home of negro tribes. The

surface is a succession of fertile plains. The people are engaged in herding cattle.

30. Some of the towns, including Saccatoo and Timbuctoo, are centres of a large caravan-trade. Slaves, gold-dust, ivory, and ostrich feathers are exported.

31. **Senegambia** takes its name from the two rivers that drain its surface. The French, Portuguese, and English have settlements along the coast. Gum-arabic, palm-oil, and hides are exported. *St. Louis* is a French settlement and seaport.

32. **The Guinea Coast** includes Liberia, Sierra Leone, and a number of European colonies. There are native states farther inland. Lower Guinea belongs to Portugal.

33. **The Republic of Liberia** was founded as a home for slaves from the United States. Coffee, ivory, and gold are exported. *Monrovia* is the capital.

34. **Sierra Leone** is a British colony, settled by negroes set free from slave-ships. Palm-oil, from which soap is made, is the chief product. *Free-town* is the capital.

35. **The Congo State** occupies the most fertile

part of Africa, and is nearly one-third as large as the United States. The state is controlled by a company, of which the King of Belgium is President. *Boma* and *Leopoldville* are the chief trading-centres.

36. **Zanzibar**.—The Zanzibar coast extends from the Juba River southward for nearly a thousand miles. It includes a number of islands governed by a native Sultan. Most of the mainland belongs to the Germans and English.

37. This region is infested by the tse-tse fly, whose bite is fatal to beasts of burden. Most of the merchandise is therefore carried upon the shoulders of native porters.

38. *Zanzibar*, on an island thirty miles from the mainland, is the centre of trade of this region in ivory, spices, cotton, and slaves.



CAPE TOWN.

SOUTH AFRICA.

39. South Africa comprises Cape Colony, the Orange Free State, the South African Republic, and territorial possessions of England, Germany, and Portugal. The Orange and Limpopo Rivers drain the greater part.

40. **Cape Colony** is the most important British possession. The surface is high; the climate is mild in summer and not very cold in winter.

41. Stock-raising and ostrich-farming are the chief industries. *Cape Town* is the capital and largest city. *Kimberley* is the centre of the diamond district.

42. **Orange Free State** and the **South African Republic** are settled by Boers or Dutch farmers. Wool, grain, gold, and ostrich feathers are ex-

ported. *Bloemfontein* and *Pretoria* are their capitals. There are also several states inhabited by negro tribes.

43. **Islands**.—Madagascar is a high plateau with a belt of low coast-lands. It is now under French protection. On this island is found the travelers' tree, the leaf of which holds sometimes as much as a quart of water. Some of the native tribes are civilized and educated. *Tananarivo* is the capital.

44. The Azores, Madeira, Canary, and Cape Verde Islands are all of volcanic origin, and lie west of Africa. They produce tropical fruits, wine, cochineal, and sugar.

45. The Mascarene Islands, east of Madagascar, produce sugar, coffee, spices, and rice. *Port Louis* is one of the chief towns.

REVIEW LESSON.

What is said of the surface of Africa?

Africa is a plateau bordered by mountains and fringed with a low coast. The northern and southern parts are chiefly deserts; the central region is fertile.

What are the principal rivers of Africa?

The Nile drains the northeastern part, the Niger the western, the Congo the central region, and the Orange and Zambezi the southern part.

What is said of the lakes of Africa?

The lakes of Africa rank next to those of North America in size and number. Lake Victoria is thought to be larger than Lake Superior.

For what animals is Africa especially noted?

The hippopotamus, zebra, and ostrich are native to this grand division. The elephant, rhinoceros, lion, and antelope are common. The camel is used as a beast of burden.

To what races do most of the people belong?

The people of Central Africa are chiefly negroes. In the north they are mostly of the Semitic race; in the south there are many Europeans.

What is said of the Barbary States?

The Barbary States are inhabited chiefly by Arabs and Jews. Most of the region is subject to the French. Morocco is independent.

To what country is Egypt subject?

The Egyptian possessions are nominally under Turkish control.

For what is Egypt noted?

Egypt is one of the oldest nations in the world. It produces rice, wheat, and cotton. It is now important because of the Suez Canal.

What is said of Central Africa?

Soudan is a fertile region inhabited by tribes of negroes, who own large herds of cattle. The coast settlements are chiefly European colonies.

Where is the Congo State?

The Congo State lies in the basin of the Congo River. The King of Belgium is the President.

What are Liberia and Sierra Leone?

Liberia and Sierra Leone are states inhabited by negroes who were formerly slaves. Liberia is a republic. Sierra Leone is an English colony.

Of what does South Africa consist?

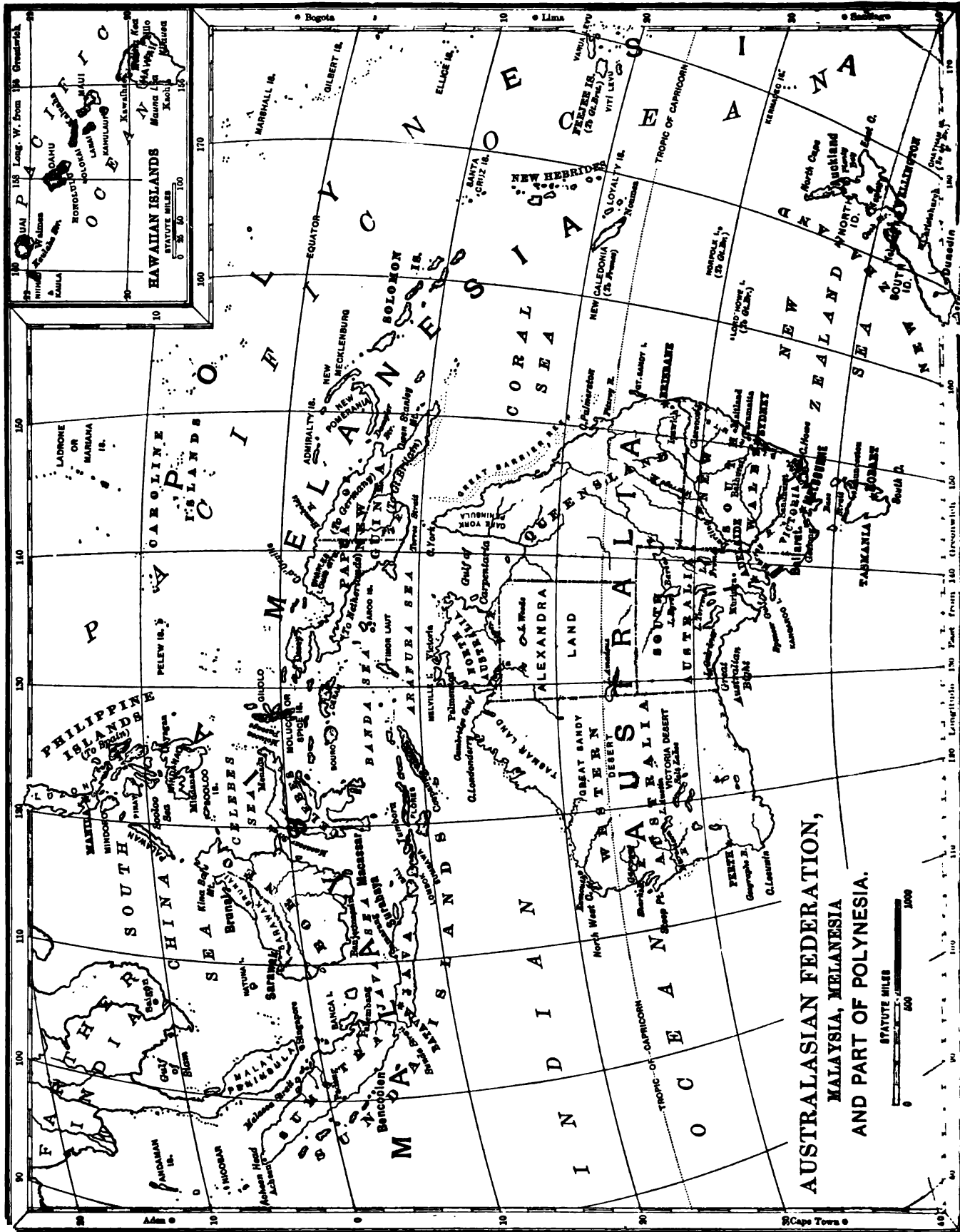
South Africa consists of English colonies and of states settled by Dutch farmers. Wool, grain, diamonds, and ostrich feathers are exported.

What is said of the islands of Africa?

The Cape Verde, Canary, Azores, and Madeira Islands are celebrated for their wine and fruit. The Mascarene Islands yield sugar and coffee.

Name the principal cities of Africa.

Cairo is one of the oldest cities in the world. Alexandria is the chief seaport of Northern, and Cape Town of Southern Africa. Timbuctoo and Abomey are centres of caravan-trade.



OCEANIA.

QUESTIONS ON THE MAP.

In what direction is this division from Asia?—from South America?—from Africa? (*See margins of map.*) In what zones are these islands chiefly situated? Are they principally in north or in south latitude? What is the distance from Singapore to Melbourne?—from San Francisco to Melbourne? *Ans.*—About 7500 miles.

What divisions are usually included in Oceania? *Ans.*—*Polynesia, Melanesia, and the continent of Australia.* What ocean north and east? What ocean west? What strait separates Australia and New Guinea?—Australia and Tasmania? What sea between Australia and New Zealand? What large gulf indents the northern part of Australia?—the southern part? What cape at the northern extremity of Australia?—at the southern point of Tasmania? Among what countries is New Guinea divided?

Australasian Federation.—What does the Australasian Federation comprise? *Ans.*—*It comprises the Australian colonies, Tasmania, New Zealand, and the Feejee Islands.* Which is the largest division of Australia?—the smallest? Where are the principal highlands in Australia? Name the two largest lakes. What is the principal river? What islands compose New Zealand? What strait separates the two largest islands? What capes project from North Island? In what direction are the Feejee Islands from Australia? How far are they from Melbourne? What is the capital of Victoria?—of New South Wales?—of New Zealand? In what part of Australia are most of the cities and towns?

The Hawaiian Islands.—In what direction are the Hawaiian Islands from San Francisco? (*See Map of West-*

ern Hemisphere.) Name the two largest islands. What city on the island of Oahu (*waikoo*)?—on the eastern coast of Hawaii (*ha-wa'i-ee*)?

REVIEW.

Where is the Coral Sea?—New Zealand Sea?—Gulf of Carpentaria?—Spencer Gulf?—Bass Strait?—Torres Strait? Where is Cape York?—North Cape?—South Cape?—Great Barrier Reef?

Where are the Australian Alps?—Mount Kilauca? (*See vignette.*)—Lake Gardiner?—Torrens Lake? Describe Murray River.

Where is Melbourne?—Sydney?—Auckland?—Wellington?—Honolulu?—Hobart?—Brisbane?—Perth?—Ballarat?—Adelaide?—

1. Oceania is the name of the grand division which includes the continent of Australia and nearly all the islands southeast of Asia.

2. The large islands belong to a system of mountains which are partly below the sea-level. There are two divisions of them, Malaysia and Melanesia.

3. The plants, animals, and general features of Malaysia are so much like those of Asia that this division is now considered a part of Asia.

4. Melanesia and Australia are so different from any other part of the world that they are considered as divisions by themselves.

5. **Australasia.**—Australia and the outlying islands are sometimes called Australasia. Australia, though sometimes called an island, is properly a continent.

6. Like most of the other continents, Aus-

tralia has high borders and a low interior. The chief highlands are in the east. There are no high mountains, and for want of them most of the continent will always be a desert.

7. There are but few rivers, and only one or two of these are permanent streams. Most of them are dry in the summer season. The Murray and Darling Rivers are the largest. Few of the lakes have outlets, and many of them are salt.

8. The vegetation of Australia is unlike that of any other part of the world. The most important trees are the eucalyptus, or gum-tree, and the tree-fern.

9. The animals are still more remarkable. Most of the species have pouches in which the young are developed. Many species, of which the kangaroo is a type, have enormously long hind legs.

10. The native people of Australia and Melanesia are called Negroids. They are black in color and hideous in appearance. The natives of New Zealand, however, are thought to be Malays.

11. A federal government, uniting all the English colonies of Australasia, is sought by the inhabitants, with prospects of success. This movement is known as the Australasian Federation.

12. The Australian colonies consist of Victoria, New South Wales, Queensland, South Australia, and Western Australia.

13. Nearly all the people are English colonists, and most of the settlements are near the coast. Gold-mining and cattle- and sheep-raising are the chief pursuits.

14. Victoria, the most thickly peopled col-

ony, is noted for its gold-mines. Next to the gold-mines of the United States, they are the most productive in the world. *Melbourne* is the capital and the chief centre of trade.

15. New South Wales is the second colony in importance. There are rich gold-mines in this colony, but the grain-fields and the herds of sheep are the chief sources of wealth. *Sydney* is the capital.

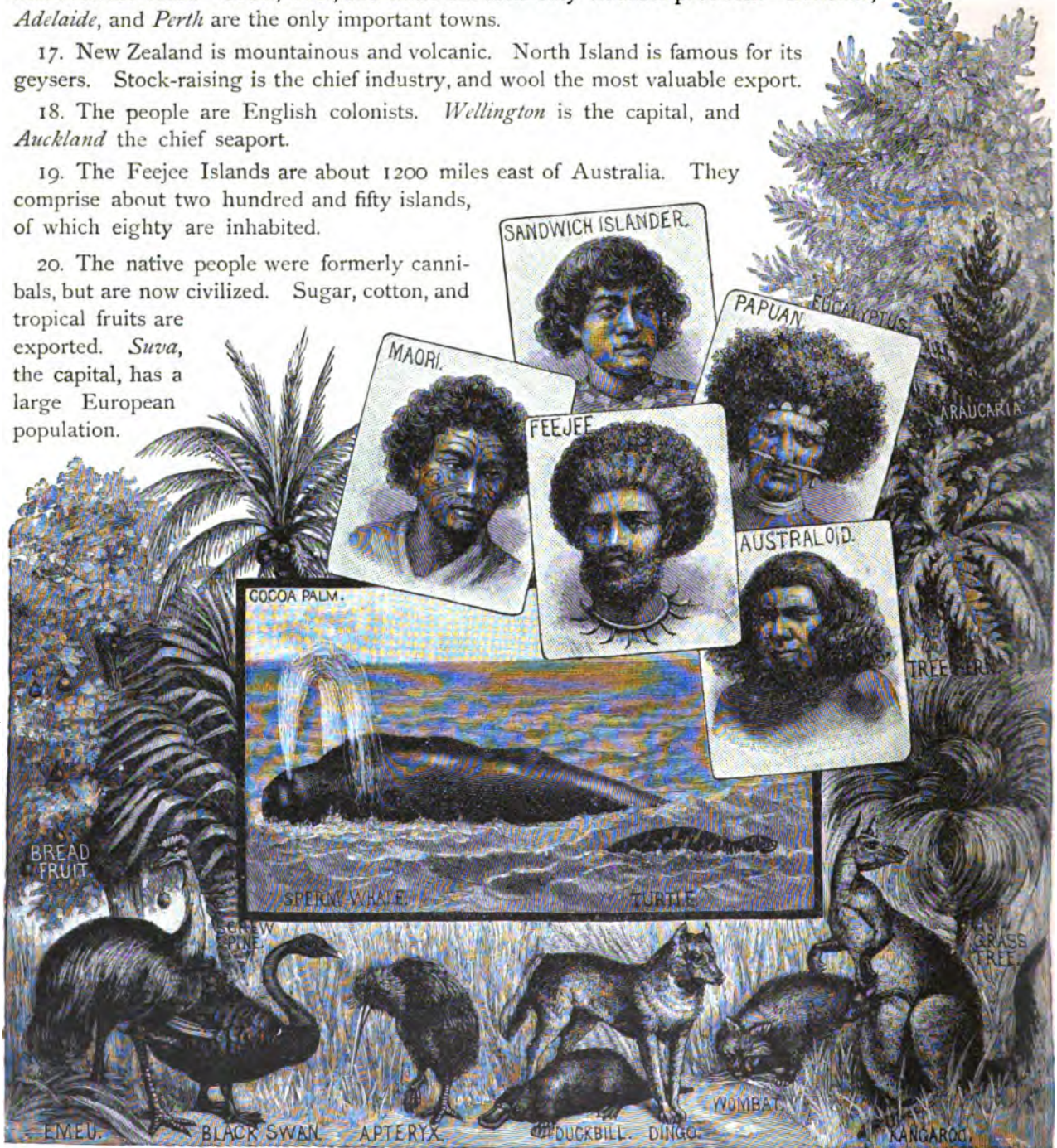
16. Queensland and the other colonies are chiefly desert regions bordered by a narrow belt of fertile coast. Grain, wool, and cattle are their only valuable products. *Brisbane*, *Adelaide*, and *Perth* are the only important towns.

17. New Zealand is mountainous and volcanic. North Island is famous for its geysers. Stock-raising is the chief industry, and wool the most valuable export.

18. The people are English colonists. *Wellington* is the capital, and *Auckland* the chief seaport.

19. The Feejee Islands are about 1200 miles east of Australia. They comprise about two hundred and fifty islands, of which eighty are inhabited.

20. The native people were formerly cannibals, but are now civilized. Sugar, cotton, and tropical fruits are exported. *Suva*, the capital, has a large European population.



21. **Polynesia.**—Polynesia includes nearly all the groups of small islands of the Pacific Ocean. Almost all these groups are ranged in irregular lines extending from northwest to southeast.

22. All these islands are of volcanic origin. A few of them are rugged peaks reaching above the sea, but most of them have sunk below the surface, and only the coral fringe or atoll around their flanks remains above water.

23. The animal life of the coral islands consists of a few species of lizards, insects, and migratory birds. The cocoa-palm, bread-fruit, and banana are the principal products. The people are Malays. All these islands are noted for their mild climate.

24. The Hawaiian Republic, or Hawaiian Islands, is the most important group of Polynesia. It consists of four large and eight small islands about 2000 miles southwest of California.

25. The largest of these islands, Hawaii, is noted for its wonderful volcanoes. All the islands contain fertile tracts of land, which yield large crops of sugar-cane.

26. The native people are gradually dying out. There is a large American and European population, and most of the trade is carried on by them. Sugar is the chief export.

27. *Honolulu*, the capital and largest city, is a famous health-resort.

REVIEW LESSON.

Name the divisions of Oceania, and mention one or more important islands of each.

What is said of the islands of Oceania?

The larger islands of Oceania belong to a mountain-system partly covered with water. The smaller islands are chiefly coral formations.

To what does Malaysia properly belong?

The plants and animals so closely resemble those of Asia that these islands are considered a part of Asia.

What is said of Australia and Melanesia?

Their plant and animal life are so different from those of the rest of the world that Australia and Melanesia are considered separate divisions.

For what are the animals of Australia remarkable?

Most of the species of animals have outside pouches in which their young are carried. The animals of the kangaroo tribe have enormously long hind legs.

Of what kind are the native people of Oceania?

The natives of Australia and Melanesia resemble negroes; those of the coral islands are chiefly Malays. Most of the people are English colonists.

Describe the surface of the Australian continent.

The surface of Australia is chiefly a plain, with highlands on the eastern and western borders. The interior is a desert.

What is said of the rivers?

The rivers in Australia are not important, and

most of them dry up in the hot summer. The Murray and Darling are the largest streams.

What is the Australasian Federation?

The Australasian Federation, when perfected, will include Australia, Tasmania, New Zealand, and the Feejee Islands.

What is the most important colony of Australia?

Victoria is the most important and thickly peopled colony of Australia. It contains numerous rich gold-mines.

What are the most valuable products of the other Australian colonies?

Wheat, wool, and cattle are the chief products of the other colonies. Their trade is chiefly with Great Britain and the United States.

For what is New Zealand noted?

New Zealand is noted for its volcanoes and geysers. Cattle- and sheep-raising is the chief industry, and wool the chief export.

What is said of the Sandwich Islands, or Hawaiian Kingdom?

Most of the people are Malays, but there are many Europeans and Americans. The native people are civilized and educated. Sugar-making is the chief industry.

What are the principal cities of Oceania?

Melbourne and Sydney are the largest cities. Wellington is the principal city of New Zealand, and Honolulu of the Hawaiian Republic.

MOULDING-BOARD EXERCISES.

BY MRS. N. R. BALDWIN.

1. A moulding-table may be used, three feet wide and four feet long. There should be a rim around it about two inches high. Let the table be painted a color to represent water. The top may be upon hinges at one end, with a brace at each side, something like that used to hold up a piano-lid, so that after any form has been moulded the top may be raised for the class to see it from their seats.

2. A simpler arrangement, within the reach of all teachers, is to take a dry-goods box, nail a rim two inches high around it, and paint it as described.

3. In the table a drawer may be made about a foot deep, to hold the material for moulding. This drawer should be upon casters, else the weight of the sand or clay will make it difficult to open. A small scoop with which to handle the clay or sand, and a large sponge or water-pot to dampen it, are all the tools necessary.

4. Sand may be got from a foundry, or artist's clay will do, or common garden-soil may be sifted and sand mixed with it, so that it will not stick to the hands when damp. Twenty-five pounds will be a sufficient quantity.

5. Instruction by means of language-lessons should prepare the class for the moulding.

6. Pupils should know of soils, and specimens of the different kinds should be collected by the class, and kept for reference, in large-mouthed bottles. The pupils should be able to tell of observations upon light, heat, air, climate, and water in its various forms. They should measure and estimate distance, from an inch to a mile. They ought to know of surfaces, curved and straight, and be able to tell about the habits of plants and animals within their observation; also of the industries of their town or village, as well as some of the chief things concerning the people and their government. Comparisons should be made now and then, by the teacher, with other countries, so that the minds of the children will seek for similar things in different places. In the lessons upon water every important feature of a river may be taught from a stream after rain, or even the gutter may be made to answer. If there are any bodies of water in the vicinity they should be studied.

7. In lessons of plant and animal life some classification should be made, the teacher only leading. The purpose of these lessons is not wholly that of imparting information, but to aid the pupils in gathering and formulating their discoveries. The teacher may add facts, but only those which are necessary to aid and stimulate the children in their inquiries.

8. This oral work should be followed as soon as possible by a written exercise embodying the points of the lesson. This may begin with a copy put by the teacher upon the blackboard, but should end in original written statements on the part of the pupils.

9. In teaching upon the moulding-board there need not be a separate handling of land-masses. Land and water should be considered together, as the motion of water has to do with the shaping of the land-outlines.

10. The teacher may begin by placing enough sand on the moulding-board to represent a hill. Teach the parts; top or summit, also called crown and crest; sides or slopes, gentle and abrupt; the foot;

the base (the land upon which the hill rests). At a short distance place a second hill, and then a group of hills. Describe the material of which they are composed; the soil; the best place for farming; the uses of a hill as a water-divide; the washing down of the earth into the lower parts between; the valley;—and so on, treating every feature of high and low lands. The hill near by is a basis from which children get the idea of mountains, even when they have never been near a mountain. Every lesson should be connected with nature, either through the eye itself or through the imagination, and care must be taken that this be done. In teaching highlands, the rainfall as controlled by them, and the climate as affected by them, should come in, and some place be spoken of with reference to these facts.

11. By previous observations upon the washing of water, children will know that a rocky coast will stand the assault of the waves, but that the incoming waters will change a sandy or clayey coast: so that the teaching of gulfs, bays, fjords, cliffs, caverns, and in fact every feature of coast-line, is made very simple, and the children retain the geographical names as easily as they do the names of games or looks, because they associate the name with the thing it represents.

12. The underground flow of water may be easily shown by sprinkling water upon the moulded hill—part sinks in; and this will lead to the teaching of rivulet, brook, spring, and all the other forms of fresh water.

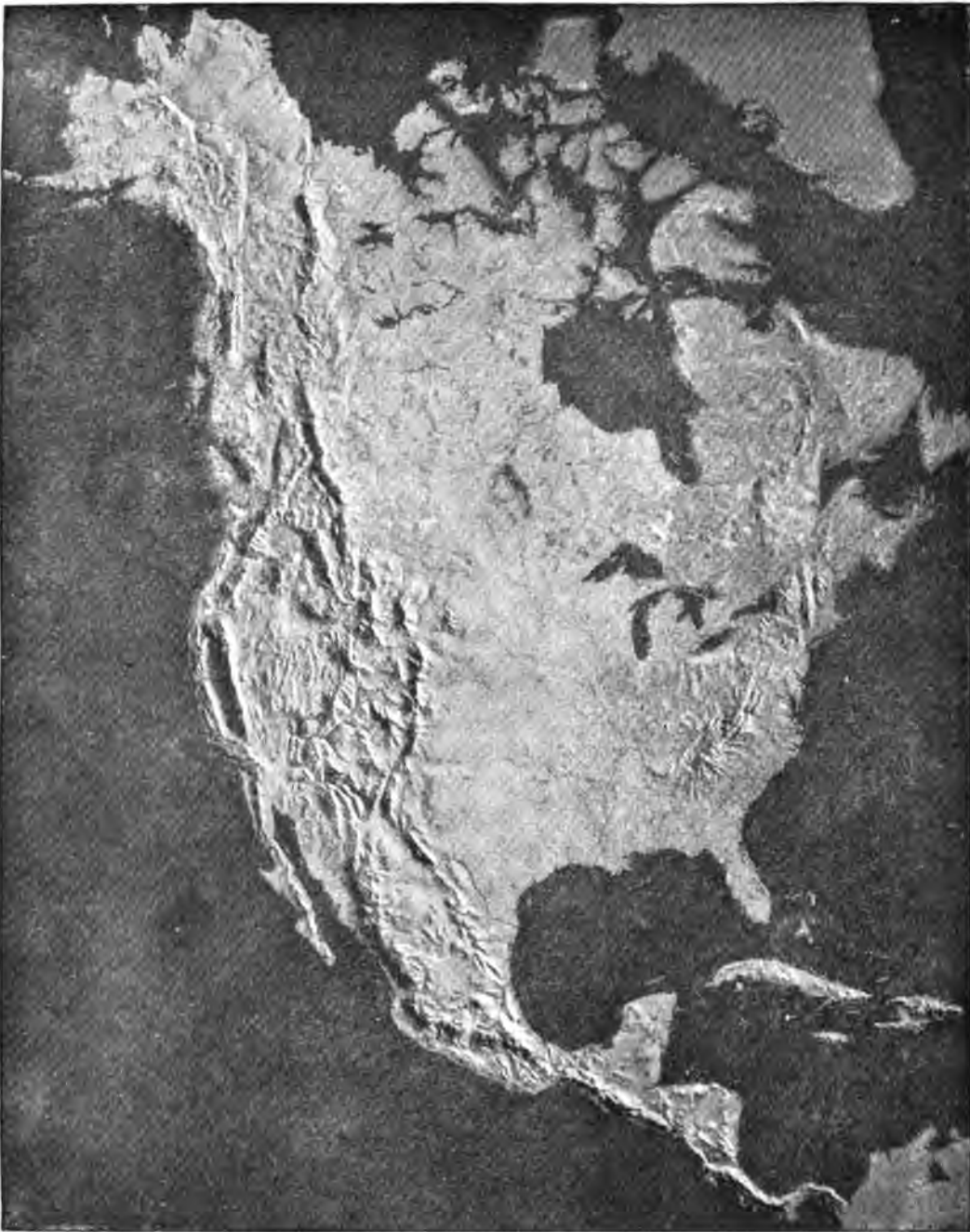
13. The ocean is but a vast pond, its waters salt from the mineral soils whence they come and through the action of evaporation. Speak of its bed, with its highlands and lowlands, the color of its waters, its currents, its vegetable and animal life, and the cables which man has laid under its deeps.

14. The fact that the vegetable and animal life of a country depend upon its physical formation should be clearly shown to pupils, so that they will judge from the form as to the products of a country.

15. The advantage of this work lies not only in the ease with which children thereby become familiar with difficult geographical terms, and remember them, but also in developing the power to reason from cause to effect.

16. If the mountains extend in this direction, which way does the water flow? If the river flows here, where is the highland? If the climate is hot and moist, the land low and marshy, what do you think the vegetable and animal products will be? Such questions as these must lead to thought on the part of the pupils, and the teaching that makes them thus reason from cause to effect produces a mental power of more value than the mere learning of many facts.

17. As the various forms (island, peninsula, isthmus, cape, etc.) are made and named, the teacher should obtain definitions that will stand the test of examinations, where these are to be held. "An island is a portion of land with water all around it" is better, as the result of seeing it as a moulded object, than if the formula were derived merely from a text-book, unless in the latter case the teacher tests the pupil's ideas as to what the text-book definition means. When island has been taught, the two kinds may follow, oceanic and continental, so that when these are taken up in a text-book the main facts are known and the lesson is but a review.



Relief Map of North America.

DIRECTIONS FOR MOULDING NORTH AMERICA.

1. Before the lesson, have a brief review of what has been taught upon highlands and lowlands, of the general flow of water, of climate as affected by heat, moisture, and elevation, of plant and animal life as controlled by the natural features of a country, and thus arouse the interest of each member of the class. Careful preparation should be made by the teacher, and the continent studied and moulded before coming to the lesson with the children. There is no reason why any teacher should not become expert in this work.

2. The teacher may begin the lesson by drawing the outlines of the continent with chalk upon the moulding-board, using the relief map as a guide. Spread out the sand so as to show the principal indentations and projections of the coasts.

3. After teaching the coast, mould first the western highlands. They extend the whole length of North America, from the Arctic Ocean to the Isthmus of Panama. They consist of a broad mountainous plateau, with the Rocky Mountains on the eastern side and the Sierra Nevada and Cascade Ranges on the western. The widest part of this plateau is about the centre, where it is a little more than 1000 miles in width.

Along the coast is a lower range of mountains, with an abrupt slope to the ocean. East of the Rocky Mountains, however, there is a long, gentle slope to the Mississippi, which includes the "Great Western Plains." In Mexico this plateau is dotted with volcanic peaks, the highest of which, Popocatepetl, rises over 17,000 feet.

4. The Atlantic highland is not so long as the Pacific highland, and is much narrower. The valley of the St. Lawrence divides it into two parts, that of the north forming the high plateau of Labrador. The different ranges of this region are collectively called the Appalachian System. These ranges are very different from those of the western coast: they are not so rugged, and the peaks are so rounded that they seem more like folds in the earth's surface than do the Rocky Mountains.

5. The Great Central Plain, formed by the inward slopes of the highlands on each side of this continent, is crossed about the middle by a rise of ground. This Height of Land, as it is called, is very slight in some places, but it serves to send the waters north into the Arctic Ocean, and those south, towards the Gulf of Mexico.

6. The waters of North America may be divided into four river-systems: those of the Arctic Slope, including the rivers of the Hudson Bay basin; those of the Atlantic Slope, which take in the St. Lawrence and many short rivers; those of the Gulf Slope, including the Mississippi with its tributaries, and the Rio Grande; and those of the Pacific Slope, comprising the Yukon, Columbia, and Colorado.

7. After the elevations have been moulded, the class should be able to trace in the various rivers by noticing the land-slopes. The supply of moisture should be talked of, as the physical features have quite as much to do with the supply as with the distribution.

8. The association of snow and scanty or no vegetation with elevated crests; the ocean as the source of moisture; the winds as its bearers, are all facts which the pupils should know, and careful questioning on the part of the teacher should bring from them the proper answers to such questions as—where the winds blowing from a given direction leave their moisture, and why; why there is a rainless region in the west; what influence the Gulf Stream has on the climate.

9. The distribution of plant and animal life belongs more properly to the continents than to separate sections. The same is true as to minerals. The placing of cities is an easy topic, because the natural advantages of land and water develop a country and mass its population.

10. After teaching the continent of North America, its islands may be taken up, not minutely, but fully enough to show that they have the same plant and animal life as the mainland. Only the principal gulfs, bays, islands, capes, lakes, and rivers should be taught.

11. Pupils themselves should mould, several working at one time, while others ask questions upon the moulded form. They may also make copies of the moulded form in putty upon pine boards, and these can be preserved as specimens of class-work.

12. After each lesson there should be written statements as to the details of the work. Sometimes the pupils may fill in sentences which have been put upon the blackboard, or write upon topics, or answer upon paper a number of questions which the teacher may select. A set of questions may be prepared by means of the hectograph upon every topic connected with this work: by passing these out to the class the teacher will save much time, and obtain results which may be marked, and thus the progress of pupils may be certainly known, and if necessary a record kept.

DIRECTIONS FOR MOULDING SOUTH AMERICA.

1. South America is often spoken of as a sister continent to North America, but, while the general structure is the same, the differences are striking. The main axis or backbone of South America is the long chain of mountains on the extreme west. Its elevation, rising as a huge wall, shuts out nearly the whole continent from access to the ocean which washes its western shores.

2. The Andean system differs from the Rocky Mountain system in being much higher and narrower. The average height of the peaks of the Rocky Mountains scarcely reaches the plateaus of the Andes, so much greater is the elevation of the latter. Nor are the Rocky Mountains so near the coast as the South American highlands, for broad and fertile valleys are between them and the Pacific Ocean. The eastern highlands of the two continents are more alike: the Plateau of Brazil has, however, a greater breadth than the Appalachian highlands.

3. The general direction of the Andes Mountains is parallel to the Pacific coast, with two great bends in the northern part. In length they exceed every other mountain-chain on the earth, being over four thousand miles long.

4. The mountain-region of Guiana may be compared to the highlands of Labrador, although there is a striking difference in the influence they exert upon their respective continents.

5. The characteristic features of South America are a main highland system on the west and extended table-lands on the east, between which is a great central plain. There is also a small mountainous region in the north. The form of the continent is similar to that of North America—broad at the north, tapering to a point at the south.

6. We may also make a comparison of the rivers of the two continents. The Amazon, the greatest of the South American rivers, is similar in position to the Saskatchewan River of North America, the Rio de la Plata to the Mississippi, and the St. Lawrence to the San Francisco of South America. This as to position only, for their relative importance is not at all the same.

7. The position of South America, as well as its structure, makes it unlike its sister continent in plant and animal life. It lies between the tropics, on both sides of the equator, and during the whole year the trade-winds sweep over it. East of the Andes there is only a portion of the Plateau of Brazil which is not bathed by these moisture-laden winds, so that torrents of rain fall during the wet season, and during the dry season the dews are so heavy as to take the place of showers. Nowhere save in the East Indies does the luxuriance of vegetation equal that of the plains of the Amazon and the coast-region of Brazil.

8. The narrow coast-regions of northern Chili and Peru, which lie west of the Andes, are almost like deserts. The winds from the Atlantic are deprived of their moisture in their passage across the Andes, and thus this region is rainless; at the south the opposite is true, for the return trade-winds blow from the Pacific, and here we find the beautiful grain-country of southern Chili, while the dreary wastes of Patagonia show clearly the influence of the mountains.

9. In this continent, as in North America, we find the distribution of population and of plant and animal life dependent upon the natural or physical features.



Relief Map of South America.



Relief Map of Europe.

DIRECTIONS FOR MOULDING EUROPE.

1. Europe is not a separate mass of land, and, although generally called a continent, is really a vast peninsula extending from the north-western part of Asia. It comprises about a fourteenth part of the known land of the globe.

2. The Ural Mountains, Ural River, Caspian and Black Seas, and Caucasus Mountains form natural boundaries, but do not correspond to the political ones as seen on the map, p. 92.

3. For convenience in teaching, it may be well first to consider Europe as a whole, making the outline the subject, and then, working from the Ural Mountains, teach Low Europe, afterwards High Europe, and sum up by a review lesson uniting the parts to form the whole grand division.

4. Beginning with the White Sea on the north, we note the fact that for more than six months of every year it is white indeed with ice and snow.

5. Then, noticing the western outline of Norway, with its ice-worn fjords, we come to the North Sea, which is sometimes called the

German Ocean. Passing through the English Channel, we reach the Bay of Biscay, noted for its storms. Thence through the narrow Strait of Gibraltar we enter the Mediterranean Sea. There are too many arms to this sea for little children to remember, so that only those named on the map need be taught, as they are the important ones. Speak of the many islands in the Aegean Sea; mention that the Sea of Marmora is so called because of the marble found there; that the Bosphorus means "Ox ford;" that the Black Sea is so named on account of the fogs and thunder-storms which prevail there. The Caspian Sea is thought to have once been united to the Black Sea, as the land is so low between the Sea of Azov and the Caspian Sea that should the waters of the Black Sea rise twenty feet they would flow into the Caspian Sea. The length of the indented coast-line of Europe is estimated at not less than sixty thousand miles.

6. Now mould the Ural Mountains, remembering that they are low elevations with hardly any mountain-features; then spread out the sand to represent the low land which forms one vast plain without a single mountain-range. Its water-shed is the slight swell crossing the central part, the highest point being the Valdai Hills, which are about

one thousand feet in elevation. Most of the rivers of this plain rise in these hills.

7. Next mould the Caucasus Mountains. Speak of them as forming part of the great mountain-system which extends east and west along the southern part of Europe, and of their being a natural limit of Europe on the southeast. These mountains lie in parallel chains with deep gorges between, and, although they reach far above the perpetual snow-line, there are not the vast snow-fields and glaciers that are to be found in the Alps, the snow-fall being very light and the region dry.

8. The tundras of the low northern plain are moss-covered swamps, so frozen that even in the warmest weather the soil is never thawed for more than three feet below the surface. Towards the Black and Caspian Seas there are treeless steppes where the grass grows taller than the average man, and vast herds of cattle find pasturage.

9. Nearer the Caspian Sea the soil is so salty that only saline plants will grow, showing that the waters once covered the country to a greater extent than they do now. The treeless condition of the Caspian region is owing to its dryness, not to its cold.

10. The northern part of the Caspian Sea is ice-bound in winter from three to five months, so that vessels cannot enter the Volga until the middle of April. Canals are built connecting the rivers that feed the Caspian Sea with those that flow into the White, Baltic, and Black Seas.

11. Attention should be called to the depressions in this plain across the northwestern region, and the filling of them forming a great chain of lakes. Lake Ladoga is as wide as the English Channel between Cherbourg in France and Portsmouth in England; it is the largest fresh-water lake in Europe. The climate of this low plain should be taught. The northern part is locked in snow for nine months of the year, and when the summer sun melts the snow the plains are seen to be covered with moss, with here and there a stunted willow. No grain can grow here, and the inhabitants must depend on the animal kingdom, the seals, reindeer, and sea-fowls, to furnish them with food in which there is heating force that will enable them to resist the cold.

12. The Don, the Dnieper, and the Danube all flow into the Black Sea. The Danube is the great channel of commerce between the East and central Europe, several thousand vessels carrying grain on this highway. It has sixty navigable tributaries.

13. The Volga is the great highway of the Russian lowland, and with its many branches drains this great inland basin.

14. The principal cities should be located and some distinctive features of people and place be given.

15. The teacher may proceed in this manner with High Europe, and when the main points have been learned should add something as to the government and religion of the various countries.

16. The British Isles once formed a part of the mainland, and should be taught as continental islands.

17. Put upon the blackboard the words the children have not previously had, so that they may be correctly spelled in the written exercise which should follow each lesson.

18. It is impossible in the limits of this book to give all that should be taught, but by taking these lessons for a basis, teachers will be stimulated to further investigation which should result in making geography an attractive study.

DIRECTIONS FOR MOULDING ASIA.

1. The same general plan may be followed in moulding Asia as was observed in moulding Europe. Sketch the outline with crayon upon the moulding-board, spread the sand over the continent thus outlined, and teach carefully the indentations and projections, using other continents for comparison where it is possible. In Asia, as in Europe, there are three southern peninsulas (name them as you proceed). Compare Arabia with Spain—as to position and outline only at this time. Then Kamchatka and the seas by which it is enclosed may be compared to the larger peninsula of Scandinavia and its surrounding waters; Japan and the waters west of it to the British Isles and the North Sea.

2. The lowlands of Europe and Asia are so similar that only a few characteristics of the latter need be mentioned. The plains near Lake Balkash and the Aral Sea are mostly covered with drift sand. Where rivers cross these deserts and where water can be used to irrigate the soil it becomes very productive, as may be seen in the gardens about Khiva.

3. The Kirghee Steppes are grassy plains over which roam flocks of broad-tailed sheep and herds of camels that belong to roving tribes of Kirghee. As we go north the wooded tract is found covered with forests of birch, pine, and fir trees. Still farther north we come to the level frozen tundras, where in winter it is almost impossible to tell where the land ceases and the ocean begins, except as the shore-line is traced mainly by drift timber.

4. Asia is the continent of great mountains and table-lands. The highlands extend from the Mediterranean Sea on the west, across the continent to Bering Sea on the northeast, and the Relief Map on p. 128 will clearly show the various elevations. The teacher may vary the lesson by having the pupils take an imaginary trip across the continent after the elevations have been made. Starting in India from the Ganges basin, and going north, they would come to the forests and swamps at the base and along the lower slopes of the Himalaya Mountains, and, farther beyond, to forests of oak, walnut, and other trees similar to those of southern Europe. Still climbing, when they had reached an altitude of about 10,000 feet they would find these forests replaced by pine trees. After these would come the vegetation of the cold regions, and finally the snowy summits of this highest range, whose name means "perpetual snow," would be reached. After this they might cross their crests through some of the many high passes, and descend into the plateau of Thibet, the highest in the world, where grain can be grown only in the valleys, but where the long-haired goat and yak find enough grazing as they roam about. Thence they would cross the Hindoo Koosh Mountains into the basin of the Tarim River and the desert of Gobi. In Soongaria they would find the highland region of the Altai Mountains. Then once more descending they would reach the lowland plain of Siberia, which has already been taught.

5. The waters should next be studied—the river-basins, and the general direction of the different streams, together with the desert and steppe regions around the Caspian and Aral Seas, near Lake Balkash, and in Thibet, Turkestan, and Mongolia, from which no rivers flow to the ocean.

6. The rivers which flow northward through the Siberian plain are the greatest. The Obi is 2700 miles long, and in summer is the great highway of western Siberia. It has more fish, too, than any other river in Siberia. The Irtysh is its chief tributary. The Yenisei River begins in Lake Baikal, the largest fresh-water lake in Asia. This lake



Relief Map of Asia

is 300 miles long, and is traversed in summer by steamboats, but from November till the latter part of April it is covered with ice and traffic is carried on by means of sledges. The Lena River rises near this lake, in the highlands of the Yablonoi Mountains. It is also ice-bound from October till May.

7. On the eastern slope is the Amoor River. The meaning of its name is "Black River," from the color of its waters. A little farther south on this same slope are the two great rivers of China, the Hoang-Ho, or Yellow River, and the Yang-tse-Kiang, or "Son of the Ocean." The Hoang-Ho is often called "the trouble," because of its wayward and oft-changing course. The river is of little use, as even a Chinese vessel can hardly ascend against its current. The Yang-tse-Kiang is the great river of China, and vessels which carry tea to other countries can take cargo at least seven hundred miles from the mouth of the river. Then from the southern slope, flowing into the South China Sea is the Mekong, which with its tributaries drains the greater part of Farther India. Flowing into the Bay of Bengal we find the three large rivers the Irrawaddy, the Brahmaputra, and the Ganges.

8. The latter is the sacred river of the Hindoos, and has its source nearly 14,000 feet above the sea, among the snow-clad Himalaya Mountains. The people in the region of the Ganges believe its waters to have wonderful powers, and if they cannot reach it to bathe in, they buy flasks of the water from the priests. The Indus River also has its beginning in the Himalaya Mountains. It flows through a region of shifting sands, and, from the difficulty of navigation, is not of much commercial value.

9. The Tigris, which means "arrowy," is a very rapid river, and carries down great quantities of silt and mud. Some allusion to the historical importance of this river, and of the Euphrates, which begins near Mt. Ararat and flows parallel with the Tigris (though not named on the map), would be of interest.

10. For convenience in teaching the climate, it may be well to think of Asia as in parts, and consider first the climate of the Siberian plain, then that of the highlands, and finally that of the southern peninsulas. The vegetation, animals, and minerals should follow. Attention should be called to the fact that most of the food-plants and domestic animals now found in different parts of the world came from Asia. It is thought, too, that the human race first lived in Asia and spread from there over the earth. The nomadic habits of tribes should be traced to the cause,—the desert-like country and the pastoral regions. Attention should then be called to the massing of the people in the south and east. The wonderful inventions of the Chinese should be mentioned—their paper-making, printing, discovery of the compass and the use of coal, their beautiful art of pottery, and their early use of guns and gunpowder. The difference between Chinese and Japanese progress should be shown, the latter having accomplished so much more in the last twenty years than the Chinese, who hold still to ancient customs.

11. If the teacher chooses to select one pupil from the class to personate a foreign child and the other members of the class are allowed to ask such questions as will cover the entire range of the various lessons on the locality in which the child is supposed to live, the habits of the people, style of dress, the difference between their houses and those of this country, manner of school-life, manners to superiors, food, and the preparation and eating of it, and also the methods of travel and trade, it will deepen the impression of the teaching and create in the pupils a real love for geographical knowledge.

DIRECTIONS FOR MOULDING AFRICA.

1. Africa has an almost unbroken coast-line of sixteen thousand miles. The contrast between the indented coast of any other mass of land and the massive African shores has always been noticed by geographers, and there are no islands that lie very near the coast, as in the other continents, for the deep channel that separates Madagascar from Africa is about three hundred miles wide.

2. Africa is not difficult to mould, because it has a compact, rounded form; and by this time the teacher will have acquired skill in handling the moulding-board and should not be compelled to trace this continent upon it, but should begin at once to shape the sand.

3. Attention may be called to the almost unbroken succession of ridges or highlands that border or enclose the interior table-lands, a feature which accounts for the almost unknown tracts of country, although travelers have within a few years explored them to some extent. Begin then with the highlands that form the northern border. In Morocco these heights are called the Atlas Mountains. At the southern end of the Suez Canal the land rises, and as we proceed southward this chain is found increasing in height until it culminates in Abyssinia, where it is from seven to eight thousand feet above the sea. Farther south we come to Mt. Kenia, whose snow-capped top stands 18,045 feet above the sea, and not far off towers Mt. Kilima Njaro, 18,700 feet high.

4. South of the Orange River the highlands run east and west. Parallel with the western coast are ridges, with breaks through which the rivers find their way to the ocean. North of the Orange River is a strip of desert which for position may be compared to the desert of Atacama in South America.

5. For convenience in teaching, we may divide the continent of Africa into three parts—North Africa, including the Great Desert, the Soudan, and South Africa.

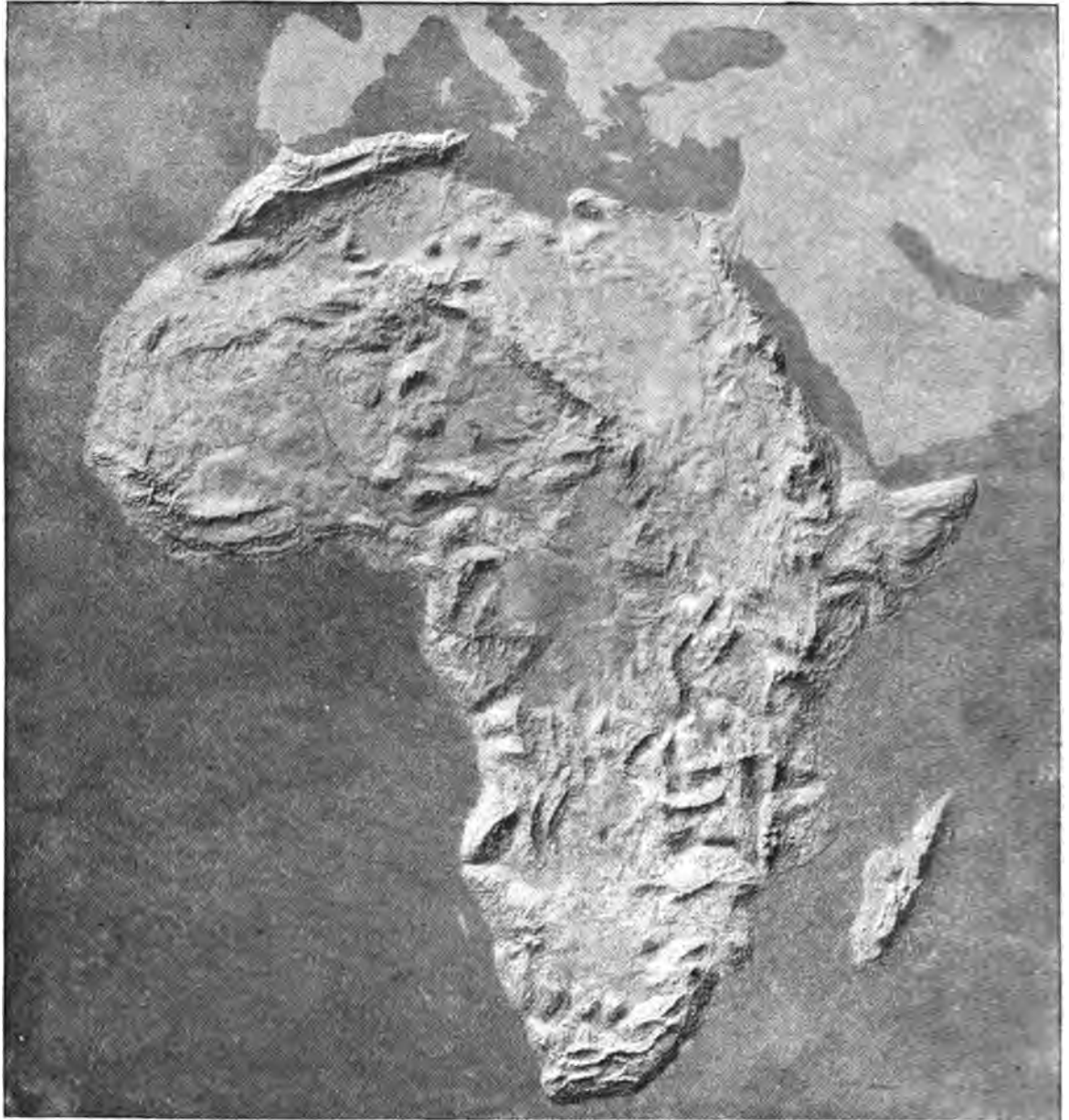
6. The first region may be moulded and names given to the various countries—their position with reference to the tropic of Cancer—the climate, with its two seasons—vegetation, semi-tropical, with date, gum, and cypress trees—and finally the animal life.

7. The habits of the people—mostly Arabs—living in cities, and in wandering tribes. The former glory of Egypt may be spoken of—the ruins and pyramids—the richness of the valley of the Nile—the irrigation by canals—the villages along the river, with their clusters of palm trees—the water-plants, lotus, papyrus, etc.—the Suez Canal and its importance.

8. The Barbary States and the French possessions there—the cities, with their few manufactures, and exports. The Sahara—a desert equal in area to all of Europe—not a level plain, but consisting of large sandy tracts, rocky ridges, and oases, where the elevations cool and condense the moisture so that verdure results. The caravans that cross this waste country, and their burdens.

9. South of the Great Desert is a vast plain, fertile and ridged with highlands. There are patches of forest, pasture-lands, and many shallow lakes and ponds.

10. Rice, indigo, cotton, and sugar-cane are grown. Gold-dust, palm-oil, and ivory are exported. In the cities the thatched huts of the negroes and the square, flat-roofed houses of the Arabs stand side by side. Along the coast the people are engaged in the slave-trade. Herds of cattle are a chief source of wealth. In the extreme east is the wedge-shaped Abyssinian Plateau, where the people claim to be descendants from King Solomon.



Relief Map of Africa.

11. The region between the Soudan and South Africa is the least known of all Africa. The tribes are mostly uncivilized negroes. Livingstone and Stanley have both written of their explorations in this part of Africa. The rivers are large, and there are many lakes which feed the Nile. The thick tropical forests are the homes of the lion, elephant, zebra, monkey, and antelope, while the streams abound in crocodiles and hippopotami.

12. South Africa is a dry plateau-region with fertile valleys. The streams of Cape Colony are like those of Algeria, and from furious torrents after rain gradually become less during the dry season. The Orange River is the only one of this region that is continuously a stream; and it is not of value as a highway, because of the steep

cataracts. The bulbous plants and the heath of this region are profuse, as are also the cacti. Maize, barley, oats, and corn are raised. The wild animals of the central jungles are found in South Africa, but in the settlements they have given place to herds of sheep and goats.

13. A brief account of the discovery of the Cape of Good Hope by the Portuguese—of the Dutch settlements—of the British acquirement—and a description of modes of travel, and of the diamond-mines of West Griqualand, will be of interest. Such work will require thoughtful preparation and reading on the part of the teacher. Dr. Holub's *Seven Years in South Africa* and Livingstone on South Africa will be of service.

AREA OF THE WORLD.

(197,100,000 square miles.)

Land 52,361,000 square miles.		Water 144,739,000 square miles.	
North America	9,349,700 sq. miles.	Atlantic Ocean	35,000,000 sq. miles.
South America	6,887,800 "	Pacific Ocean	75,000,000 "
Europe	3,942,500 "	Arctic Ocean	4,000,000 "
Asia, including Malaysia	16,956,300 "	Antarctic Ocean	7,000,000 "
Africa	11,515,000 "	Indian Ocean	23,000,000 "
Oceania and South Polar Regions	3,709,700 "	Inland Waters	739,000 "

POPULATION OF THE WORLD.

(Total, 1,479,500,000).

By Grand Divisions.		By Races.		By Religions.	
North America	88,000,000	Caucasian (chiefly Aryan and Semitic)	670,000,000	Christians	400,000,000
South America	33,600,000	Mongolian (Turanic)	620,000,000	Jews	7,000,000
Europe	360,600,000	Negro	150,000,000	Mohammedans	200,000,000
Asia, including Malaysia	823,100,000	Malay (Turanic)	35,000,000	Buddhists	500,000,000
Africa	168,500,000	American (Turanic)	12,000,000	Brahmans	150,000,000
Oceania	5,700,000	Mixed Races, etc.	12,500,000	Other Religions	222,500,000

AREA AND POPULATION OF PRINCIPAL COUNTRIES.

	Area in sq. miles.	Population.		Area in sq. miles.	Population.
NORTH AMERICA.			Servia	18,576	2,157,477
Greenland	837,800	10,200	Greece	25,143	2,217,000
Iceland	40,400	69,200	ASIA.		
Dominion of Canada	3,614,800	4,830,400	Asiatic Russia	6,465,000	14,127,000
Newfoundland	42,700	193,100	British India	1,760,000	292,382,000
United States	3,668,167	62,982,244	Siam	309,000	9,000,000
Mexico	751,600	11,395,700	Anam	89,000	6,000,000
Central American States	179,700	3,010,300	Cambodia	39,000	1,000,000
Cuba	45,900	1,521,700	Chinese Empire	4,292,000	361,500,000
Hayti	29,800	1,377,000	Corea	84,000	10,519,000
Jamaica	4,193	639,500	Japan Empire	148,000	40,072,000
Porto Rico	3,531	806,700	Beloochistan	167,000	1,020,000
SOUTH AMERICA.			Afghanistan (including Kafiristan)	240,000	4,600,000
Colombia	464,500	3,321,100	Persia	635,000	7,500,000
Venezuela	403,100	2,238,000	Asiatic Turkey	709,000	15,479,000
Guiana	169,000	373,900	Arabia (Independent)	959,000	2,142,000
Ecuador	115,700	1,204,400	Java	51,000	22,818,000
Peru	439,000	2,980,000	Sumatra	180,000	3,783,000
Bolivia	515,200	1,434,800	Borneo	284,000	1,740,000
Brazil	3,228,500	14,600,000	Celebes	77,000	1,500,000
Paraguay	97,700	330,000	Philippine Islands	114,000	7,000,000
Uruguay	69,000	711,700	AFRICA.		
Argentine Republic	1,077,000	3,203,700	Morocco	314,000	8,016,000
Chili	299,600	3,165,300	Algeria	258,000	3,855,000
EUROPE.			Tunis	45,000	1,500,000
England	50,823	27,482,104	Tripoli	399,000	1,000,000
Wales	7,363	1,518,194	Egypt (to Waday Halfa)	361,000	6,818,000
Scotland	30,463	4,033,103	Sahara	2,386,000	2,500,000
Ireland	32,531	4,706,162	Egyptian Soudan and Nubia	759,000	10,830,000
Germany	209,995	49,424,135	Soudan and Upper Guinea	2,210,000	76,334,000
France (including Corsica)	207,116	38,218,003	Abyssinia	196,000	4,500,000
Russia	2,198,487	98,840,489	Congo State	865,000	14,100,000
Austria-Hungary	261,318	42,630,650	Cape Colony	222,000	1,526,000
Italy (including Sicily and Sardinia)	110,657	30,158,408	Orange Free State	50,000	208,000
Netherlands	12,742	4,558,095	South African Republic	114,000	679,000
Belgium	11,374	6,093,798	Madagascar	229,000	3,583,000
Denmark	14,780	2,172,205	OCEANIA.		
Norway	125,598	1,999,176	Australia	2,945,000	3,073,000
Sweden	173,974	4,774,409	Tasmania	26,000	157,000
Spain	191,994	17,246,688	New Zealand	105,000	673,500
Portugal	34,508	4,306,554	New Guinea	312,000	837,000
Switzerland	15,761	2,933,334	Hawaiian Islands	6,600	92,000
Turkey (including Bulgaria and E. Roumelia)	105,234	8,907,375	Feejee Islands	7,800	630,000
Roumania	50,589	5,000,000			

COMMERCIAL GEOGRAPHY.

[Leading Articles of Commerce, and the Countries in which they are Chiefly Produced.]

Wheat.—United States, Russia, France, Austria-Hungary.

Corn.—United States, Canada, Mexico.

Cattle-Products.—United States, Canada, Mexico, South America, Australia, Cape Colony.

Sugar.—United States, Cuba, South America, Hawaiian Islands.

Coffee.—Brazil, Java, Central American States, Arabia, Liberia.

Tea.—China, Japan.

Rice.—China, India, Japan, United States.

Wines.—France, Spain, Germany, Austria-Hungary, United States.

Spices.—East Indies, West Indies, Guiana, India.

Salt.—United States, Austria, Spain.

Cotton.—United States, India, China, Egypt.

Silk.—China, Japan, Italy, France.

Wool.—United States, Australia, Spain.

Iron.—Great Britain, United States, Belgium, Russia, Sweden.

Coal.—United States, Great Britain, Belgium, Australia.

Gold.—United States, Australia, Guinea, Russia.

Silver.—United States, Mexico, Peru, Austria.

Copper.—United States, Great Britain, Chili, Australia, Austria.

Tin.—Great Britain, Spain, Australia, East Indies.

Petroleum.—United States, Russia.

Lumber.—United States, Canada, Russia, India.

Tobacco.—United States, Cuba, Turkey.

SOME OF THE PRINCIPAL CITIES OF THE WORLD.

North America.			Valparaiso (1890), Chili . . .	150,000	Odessa (1885), Russia . . .	240,000	Shanghai (1890), China . . .	380,000
Montreal (1891), Dom. of Can. . .			Lima (1890), Peru	104,000	Antwerp (1890), Belgium . . .	227,200	Kioto (1890), Japan	279,800
Mexico (1889), Mexico			Bogota (1885), Colombia . . .	96,000	Bristol (1891), England	221,700	Lucknow (1891), India . . .	272,600
Havana, Cuba			Europe.			221,300	Ning-Po (1890), China . . .	250,000
United States (1890).			London (1891), England	4,211,000	Bucharest (1885), Roumania . .	216,400	Seoul, Corea	250,000
New York, N. Y.			Paris (1886), France	2,344,500	Bradford (1891), England . . .	212,000	Benares (1891), India . . .	222,400
Chicago, Ill.			Berlin (1890), Germany	1,579,200	Nottingham (1891), England . .	209,100	Tcheran (1888), Persia . . .	210,000
Philadelphia, Pa.			Vienna (1890), Austria	1,364,500	Rotterdam (1890), Neth. . . .	206,500	Delhi (1891), India	193,600
Brooklyn, N. Y.			Constantinople (1885), Turk. . .	873,600	Genoa (1890), Italy	2 4,900	Smyrna, Asiatic Turkey . . .	186,500
Saint Louis, Mo.			St. Petersburg (1890), Rus. . .	861,300	Westham (1891), England . . .	202,300	Mandalay (1891), India . . .	187,900
Boston, Mass.			Moscow (1885), Russia	753,500	Lille (1886), France	188,300	Cawnpore (1891), India . . .	182,300
Baltimore, Md.			Glasgow (1891), Scotland . . .	565,700	Florence (1890), Italy	191,500	Rangoon (1891), India . . .	181,200
San Francisco, Cal.			Naples (1890), Italy	530,800	Lille (1886), France	188,300	Tabreez (1888), Persia . . .	180,000
Cincinnati, Ohio			Liverpool (1891), England . . .	518,000	Prague (1890), Austria	184,100	Bangalore (1891), India . . .	179,700
Cleveland, Ohio			Buda-Pesth (1890), Hungary . .	506,400	Brussels (1890), Belgium . . .	182,300	Allahabad (1891), India . . .	176,800
Buffalo, N. Y.			Manchester (1891), England . . .	505,300	Frankfort-on-the-Main (1890),		Lahore (1891), India	176,700
New Orleans, La.			Madrid (1887), Spain	470,300	Germany	179,900	Agra (1891), India	165,300
Pittsburg, Pa.			Warsaw (1890), Russia	443,400	Riga (1885), Russia	175,300	Nagoya (1890), Japan	162,800
Washington, D. C.			Birmingham (1891), England . .	429,200	Hanover (1890), Germany . . .	165,500	Damascus, Asiatic Turkey . .	150,000
Detroit, Mich.			Rome (1890), Italy	423,200	Königsberg (1890), Germany . .	161,500	Ha Noi, Tonquin	150,000
Milwaukee, Wis.			Amsterdam (1890), Neth. . . .	417,500	The Hague (1890), Neth. . . .	160,500	Kobe (1890), Japan	135,600
Newark, N. J.			Milan (1890), Italy	414,600	Trieste (1890), Austria	158,300	Yokohama (1890), Japan . . .	127,000
Minneapolis, Minn.			Lyons (1886), France	401,900	Venice (1890), Italy	158,000	Tashkend (1885), Asia. Rus. .	121,400
Jersey City, N. J.			Marseilles (1886), France . . .	376,100	Ghent (1890), Belgium	153,700	Aleppo, Asiatic Turkey . . .	110,000
Louisville, Ky.			Leeds (1891), England	367,500	Christiania (1891), Norway . .	150,400	Bagdad, Asiatic Turkey . . .	100,000
Omaha, Neb.			Leipsic (1890), Germany	353,300	Liege (1890), Belgium	149,800		
Rochester, N. Y.			Munich (1890), Germany	348,300	Toulouse (1886), France	147,600		
Saint Paul, Minn.			Breslau (1890), Germany	335,200	Athens (1889), Greece	107,800		
Kansas City, Mo.			Sheffield (1891), England . . .	324,200			Asia.	
Providence, R. I.			Hamburg (1890), Germany . . .	323,900	Peking (1890), China	1,650,000	Cairo (1882), Egypt	396,500
Denver, Colo.			Turin (1890), Italy	320,800	Canton (1890), China	1,600,000	Alexandria (1882), Egypt . . .	275,700
Indianapolis, Ind.			Copenhagen (1890), Denmark . .	312,400	Tokio (1890), Japan	1,389,700	Fez, Morocco	150,000
Allegheny, Pa.			Cologne (1890), Germany	281,300	Tien-Tsin (1890), China	950,000	Tananarivo, Madagascar . . .	150,000
South America.			Dresden (1890), Germany	276,100	Calcutta (1891), India	840,100	Tunis, Tunis	135,000
Rio Janeiro (1890), Brazil. . . .			Barcelona (1887), Spain	272,500	Bombay (1891), India	804,500	Zanzibar, Zanzibar Id.	100,000
Buenos Ayres (1891), A. R. . . .			Palermo (1890), Italy	267,400	Hang-Chow (1891), China	800,000		
Santiago (1890), Chili			Edinburgh (1891), Scotland . . .	261,300	Poo-Chow (1891), China	636,000	Oceania.	
Bahia (1890), Brazil			Belfast (1891), Ireland	255,900	Osaka (1890), Japan	476,300	Melbourne (1891), Australia. .	489,000
Recife (1890), Brazil			Dublin (1891), Ireland	254,700	Madras (1891), India	450,000	Sydney (1891), Australia . . .	386,400
Montevideo (1889), Uruguay. . . .			Lisbon (1876), Portugal	242,300	Bangkok, Siam	400,000	Manila (1880), Philippine Is. .	270,000
			Bordeaux (1886), France	240,600	Hyderabad (1891), India	392,700	Adelaide (1891), Australia . .	133,000
							Surabaya (1889), Java	133,400
							Batavia (1889), Java	99,500

Seven Nations having Largest Territory.			Highest Mountain-Peak of each Grand Division.		Longest River of each Grand Division.	
Area.	Pop.			Feet.		Miles.
British Empire	9,673,000	340,200,000	Mount Everest, Asia	29,008	Mississippi-Missouri, North America	4,200
Russian Empire	8,664,000	113,000,000	Vol. Aconcagua, South America	23,900	Mississippi proper	2,616
Chinese Empire	4,292,000	361,500,000	Mount Kilima Njaro, Africa	18,700	Amazon, South America	4,000
United States	3,668,000	63,000,000	Mount Elbrooz, Europe	18,537	Nile, Africa	3,900
Brazil	3,228,000	14,600,000	Mount Orizaba, North America	18,314	Obi, Asia	2,700
France and Poss.	3,022,000	69,000,000	Vol. Singaling, Oceanica (Sumatra)	15,000	Volga, Europe	2,300
German Empire	1,143,000	55,000,000			Murray-Darling, Australia	1,600

PRONOUNCING VOCABULARY.

KEY.

a as in hate.
ā " hat.
ā " palm.
e " me.
ē " met.
i " pine.

I as in pin.
ō " note.
ō " not.
oo " moon.
ōō " foot.
ōw " cow.

u as in mute.
ū " but.
g " get.
N almost as ng in long.
ñ as ny in banyan.

A.

Abomey, ab-o-mā'.
Acapulco, ā-kā-pool'ko.
Aconcagua, ā-kon-kā'gwā.
Aden, ā'den.
Ad-i-ron'dack.
Ad-ri-at'ic.
Ægean, e-je'an.
Afghanistan, āf-gān-is-tān'.
Agulhas, ā-gool'yās.
Ajaccio, ā-yāt'cho.
Al-be-marle'.
Albuquerque, āl-boo-kair'ka.
Aleutian, ā-loo'she-an.
Algiers, āl-jeerz'.
Aliaska, ā-le-ās'kā.
Alleghany, āl-le-gā'ne.
Altai, āl-ti'.
Altamaha, awl-ta-ma-haw'.
Alton, āl'ton.
Amoor, ā-moor'.
An-dros-cog'gin.
Anglesea, āng'g'l-se.
Antilles, ān-teel', or an-til'leez.
Ap'en-nines.
Ap-pa-lach'ee.
Ap-pa-lach'i-an.
Aral, ār'al.
Argentine, ar'jen-tine.
Arkansas (state), ār'kān-sā.
Arkansas (river), ar-kan'sas.
Asuncion, ā-soon-se-on'.
Atacama, ā-tā-kā'mā.
Atchafalaya, atch-af-a-li'a.
Ath-a-bās'ca.
Auckland, awk'land.
Augustine, St., aw'gus-teen.
Aus-tra'li-a.
Azores, ā-zōrz'.
Azov, ā-zōv'.

B.

Bāb-el-mān'deb.
Ba-hā'ma.
Bahia, bā-e'ā.
Baikal, bi'kāl.
Bal-e-ār'ic.
Balize, bā-leez'.
Bāl-kān'.
Bāl-kāsh'.
Bal-la-rat'.
Barbadoes, bar-bā'dōz.
Bar-ce-lo'na.
Basel, bā'zel.
Basle, bāl.
Baton Rouge, bat'un-roozh'.
Bayou, bi'oo.
Beloochistan, bel-oo-kis-tān'.
Ben-coo'len.
Bengal, ben-gawl'.

Ber'lin; Ger. pron. bair-leen'.
Bermudas, ber-moo'das.
Beyroot, bi-root'.
Biafra, be-āf'rā.
Bloemfontein, bloom-fon'tine.
Bō-gō-tā'.
Boisé, boi'ze.
Bojador, bōzh-ā-dōr'.
Bo-liv'i-a.
Boma, bō'ma.
Bom-bay'.
Bonifacio, bō-ne-fā'chō.
Bor'ne-o.
Bos'po-rus.
Brāh-ma-poo'tra.
Bra-zil'; Port. pron. brā-seel'.
Brazos, brā'zōs.
Brēm'en.
Breton (Cape), brīt'un.
Bucharest, boo-kā-rest'.
Buda-Pesth, boo'da-pēst.
Buenos Ayres, bwā'nōs i'rēs.
Bulgaria, bōōl-gā're-a.
Butte, būte.

C.

Cabes, kā'bēs.
Cabul, kaw'bl, or kā-bool'.
Cairn-gorm'.
Cairo (Egypt), kī'ro.
Cairo (U. S.), kā'ro.
Cal-i-for'ni-a.
Callao, kāl-lā'ō or kāl-yā'ō.
Campeche, kām-pā'cha.
Can-av'er-al.
Can-tā'bri-an.
Can-tōn' (China).
Can'ton (U. S.).
Ca-rac'as.
Car'diff.
Car'di-gan.
Cār-ib-be'an.
Car-pen-tā'ri-a.
Cat-te-gat'.
Caucasus, kaw'ka-sus.
Cayenne, kā-yen'.
Cayuga, kā-yoo'ga.
Celebes, sel'e-bēs.
Cettinje, chet-teen'yā.
Ceylon, se-lōn'.
Chagres, chā'grēs.
Chat-ta-hoo'chee.
Chēl-yūs'kin.
Cheviot, chiv'e-ut.
Cheyenne, shi-en'.
Chicago, she-kaw'go.
Chihuahua, che-wā'wā.
Chili, chil'le.
Chiloe, cheel-o-ā'.
Chim-bō-rā'zo.

Chō-wān'.
Chris-ti-ā'ni-a.
Cimarron, sē-mā-rōn'.
Co-chā-bām'bā.
Cohoes, ko-hooz'.
Cologne, ko-lōn'.
Col-o-rā'do.
Concepcion, kōn-sep-se-on'.
Cor'do-vā.
Co-re'a.
Cor'si-ca.
Costa Rica, kos'tā re'kā.
Cotopaxi, ko-to-pāx'e.
Cri-me'a.

D.

Dahomey, dā-hō'mā.
Dardanelles, dar-da-nelz'.
Darien, dā-re-en'.
De-cā'tur.
Deccan, dek'kan.
Del-gā'do.
Delhi, del'le.
Dem'be-a.
Des Moines, dā-moin'.
Dnieper, nē'per.
Donegal, don-e-gawl'.
Douro, doo'ro.
Doverfield, dō'vreh-f'yēld.
Dubuque, doo-būke'.
Dwina, dve'nā.

E.

Ecuador, ek-wā-dōr'.
Edinburgh, ed'in-bur-rūh.
Elbe, elb; Ger. pron. el'beh.
El Paso, ēl-pā'so.
Espinhaço, es-peen-yā'so.
Etienne, St., sānt et-e-en'.
Eyre, air.

F.

Falkland, fawk'land.
Faroe, fā'ro.
Faz-zān'.
Finisterre, fin-is-tair'.
Flō'rēs.
Frio, fre'ō.

G.

Gairdner, gārd'ner.
Gal-ap'a-gōs.
Gallinas, gā-le'nās.
Galway, gawl'wā.
Ganges, gan'jeez.
Genoa, jen'ō-ā.
Ghauts, gawts.
Ghent, gēnt.
Gibraltar, je-brawl'ter.
Gila, he'lā.
Glasgow, glās'gō.
Gobi, go'be.

Gracias a Dios, grā'se-ās-ā-de'ōs.
Greenwich, grin'ij.
Guapore, gwā-po'ra.
Guardafui, gwar-da-fwe'.
Guatemala, gwā-te-mā'lā.
Guayaquil, gwi-ā-keel'.
Guaymas, gwi-mās.
Guiana, ge-ā'na.
Guinea, gin'ne.

H.

Hague, hāg.
Havre, hā'ver.
Hawaii, hā-wi'e.
Hayti, hā'te.
Hebrides, heb'ri-deez.
Hel'e-na (Ark.).
He-le'na (St.).
Hen-lo'pen.
Himalaya, him-ā'le-ā.
Hin-doo-stan'.
Hoang-Ho, whāng-ho'.
Hōl'yoke.
Honolulu, hon-o-hoo'loo.
Hōr'i-con.
Hué, hoo-ā'.
Hū'ron.

I.

I'da-ho.
Illinois, il-lin-oi'.
In-di-an-ap'o-lis.
Indies, in'diz.
I'o-wa.
Iran, e-rān'.
Ir-ra-wād'dy.
Itasca, i-tas'ka.
Iztacchuatl, es-tāk-se-hwāt'l'.

J.

Jaguar, jag-u-ar'.
Jamaica, ja-mā'ka.
Japura, hā-poo'rā.
Jā'vā.
Juan de Fuca, hwān-dā-foo'kā.
Juan Fernandez, hwān-fēr-nān'.
Juba, zhoo'bā.
Julianshaab, yu-li-ans-hāb'.
Ju-ni-āt'a.

K.

Kadiak, kād-yāk'.
Kā-lā-hā'ri.
Kam-chat'ka.
Kanawha, ka-naw'wā.
Kā'rā.
Ka-tah'din.
Kauai, kōw-i'e.
Kel-āt'.
Kenia, kā-ne'ā.

PRONOUNCING VOCABULARY.

Ke'o-kūk.
Khartoom, kar-toom'.
KHINGAN, kin-gān'.
Kiakhta, ke-āk'tā.
Kilauea, ke-lōw-a'ā.
Kilima Njaro, kil'e-mā-n'jā'ro.
Kiölen, ke-üh'len.
Kioto, ke-o'to.
Klām'ath.
Kolguev, kol-goo-ev'.
Kurile, koo'ril.

L.

Lab-ra-dor'.
Lad'o-gā.
Lā Pāz'.
Laramie, lār'a-me.
Las Vegas, lās-vā'gās.
Leipsic, līp'sik.
Li-be'ri-a.
Libyan, lib'yan.
Lima, le'nā.
Lim-po'po.
Liu Kiu, le-oc'ke-oo.
Lof-fo'den.
Loire, lwār.
Lo-pat'ka.
Los Angeles, loce āng'hia-lēs.
Lough Neagh, lōh nā'.

M.

Macassar, mā-kas'sar.
Ma-chi'as.
Mackinac, mak'e-nā.
Mad-a-gas'car.
Madeira, ma-de'ra.
Mad-rās'.
Mad-rid'.
Magdalena, māg-dā-lā'nā.
Magellan, mā-jel'an.
Ma-lac'ca.
Mā'lā-gā.
Managua, mā-nā'gwā.
Mān-dā-lay'.
Manila, mā-ne'lā.
Mān-i-to-bā'.
Maracaybo, mā-rā-ki'tbo.
Marañon, mā-rān-yōn'.
Mar'mo-rā.
Marseilles, mar-sālz'.
Mat-a-gor'da.
Mat-a-pan'.
Maui, mōw'e.
Mauna Loa, mōw'nā lo'ā.
Mauritius, maw-rish'e-us.
Mekong, mā-kong'.
Menai, mēn'i.
Mendocino, men-do-se'no.
Messina, mes-se'nā.
Miami, mi-am'e.
Mil'an.
Mil-wau'kee.
Min-dā-nā'o.
Mobile, mo-beel'.
Mocha, mo'kā.
Mojave, mo-hā'vā.
Molokai, mo-lo-ki'.
Mo-nad'nock.
Monmouth, mōn'muth.
Monrovia, mūn-rō've-a.
Montana, mon-tā'nā.
Montenegro, mon-tā-nā'gro.
Montevideo, mon-tā-ve-dā'o.
Montreal, mon-tre-awl'.

Moscow, mos'kō; Russian pron.
mosk'wā.
Mozambique, mo-zam-beek'.
Munich, mū'nik.

N.

Naples, nā'plz.
Nassau, nas'saw.
Nā-tal'.
Nepaul, ne-pawl'.
Neuse, nūs.
Neuweveld, n'yū've-velt.
Ne-vā'da.
Newfoundland, nū'fund-land.
New Or'le-ans.
Ngami, n'gā'mē.
Nicaragua, ne-kā-rā'gwā.
Niger, ni'jer.
Niobrara, ne-o-brā'rā.
No-gā'lēs.
Norfolk, nor'fok.
Norwich (Eng.), nōr'rij.
Nueces, nwa'sēz.
Nyanza, n'yān'zā.
Nyassa, n'yās'sā.

O.

Oahu, wā'hoo.
Obi, o'be.
Oceania, o-she-ā'ne-ā.
O-kee-cho'bee.
O-ke-fi-no'kee.
Okhotsk, o-kotsk'.
O'ma-hā.
O-mān'.
Oneida, o-ni'da.
Orinoco, o-re-nō'kō.
Or'mus.
O-sā'kā.
O-trān'to.
Ottawa, ot'ta-wa.

P.

Pacaraima, pā-kā-ri'mā.
Padre, pā'drā.
Palestine, pal'es-tīne.
Pam'li-co.
Pan-a-mā'.
Papua, pā'poo-a.
Paraguay, pā-rā'gwī'.
Par-a-mar'i-bo.
Pā-rā-nā'.
Parime, pā-re'mā.
Parina, pā-re'nā.
Pas-sa-ma-quod'dy.
Pem'bi-na.
Pend d'Oreille, pend-o-rāl'.
Pe-o'ri-a.
Petch'o-rā.
Phil'ip-pīne. [burg.
Pietermaritzburg, pe-ter-mar'its-
Pilcomayo, pil-ko-mi'o.
Pisa, pe'zā.
Pisgah, piz'ga.
Pont-char-trāin'.
Popocatepetl, pō-pō'kā-tā-pēt'l.
Port-au-Prince, por-to-prāns's'.
Poughkeepsie, po-kip'se.
Pre-to'ri-a.
Puebla, pweb'lā.
Puget, pū'jet.
Pyrenees, pir'e-neeze.

Q.

Queretaro, kā-rā'tā-ro.
Quito, ke'to.

R.

Racine, ras-seen'.
Rainier, rā'neer.
Raleigh, raw'le.
Rap-pa-han'nock.
Reading, rēd'ing.
Recife, ra-se'fā.
Reikiavik, rike'yā-vik.
Riga, re'gā.
Rio de la Plata, re'o-dā-lā-plā'tā.
Rio Grande, re-o-grān'da.
Rio Janeiro, re-o-jā-ne'ro.
Rio Pecos, re-o-pā'kōs.
Roanoke, rō-an-ōk'.
Rou-me'lia.
Russia, rush'yā.

S.

Sabine, sa-been'.
Saccato, sāk-ā-too'.
Saco, saw'ko.
Saghalin, sāg-ā-leen'.
Sag'i-naw.
Sā-hā'rā.
Said, sā-eed'.
Sāl-vā-dōr'.
Sā-mo'ā.
San Diego, sän-de-ā'go.
San Joaquin, sän-hwā-keen'.
San José, sän-ho-sā'.
Santa Fé, sän'tā-fā'.
Santiago, sän-te-ā'go.
Sar-dīn'i-a.
Sas-katch'e-wan.
Sault Ste. Marie, so-sānt-mā-re'.
Schoodic, skoo'dik.
Scioto, si-o'to.
Seattle, se-at'l'.
Sebastopol, seb-as-to'pol.
Seine, sän.
Senegal, sen-e-gawl'.
Seoul, se-ool'.
Shanghai, shāng-hi'.
Si-am'.
Sicily, sis'e-le.
Sierra Leone, se-ēr'ra le-o'nē.
Sierra Madre, mā'drā.
Sierra Morena, mo-rā'nā.
Sierra Nevada, nā-vā'dā.
Sinai, si'nī.
Singapore, sing-ga-pōre'.
Sioux, soo.
Sir Darya, seer-dar'yā.
Skag'er Rack.
Sofa, so-fe'a.
So-rā'tā.
So-rel'.
Soudan, soo-dān'.
Stā-no-voi'.
Stock'hölm.
St. Roque, sent-rōk'.
Sucre, soo'krā.
Sumatra, soo-mā'trā.
Surabaya, soo-rā-bi'ā.

T.

Tā-breez'.
Ta-co'ma.
Tahlequah, tā'le-kwā.
Tā-hoe'.
Tananarivo, tā-nā-nā-re-vo'.
Tanganyika, tān-gān-ye'kā.
Tarifa, tā-re'fā.
Tasmania, taz-mā'ne-a.

Taurus, taw'rus.
Tchad, chād.
Tegucigalpa, tā-goo-se-gāl'pā.
Teheran, tēh-h'rān'.
Tehuantepec, tā-wān-tā-pek'.
Terra del Fuego, ter'rā-del-fwā'-
go.
Terre-Haute, ter-re-hōt'.
Thames (Eng.), temz; (U. S.),
thāmz.
Thian Shan, te-ān'shān.
Thibet, tib'et.
Ti'gris.
Tim-būc'too.
Titicaca, tit-e-kā'kā.
Tocantins, to-kān-teenz'.
To'ki-o.

Tonquin, ton-keen'.
Tōr'res.
Treb-i-zōnd'.
Trieste, tre-est'.
Trip'o-li.
Tucson, too-son'.
Tulare, too-lā'rā.

U.

Ucayale, oo-ki-ā'lā.
Uintah, win'tā.
Ujiji, oo-je'je.
Uruguay, oo-roo-gwī'.

V.

Valdai, val'di.
Valencia, vā-len'she-ā.
Vallejo, vāl-yā'ho.
Valparaiso, vāl-pā-rī'so.
Vancouver, van-koo'ver.
Venezuela, ven-e-zwā'lā.
Vera Cruz, vā-rā-kroos'.
Ve-su'vi-us.
Vienna, ve-en'na.
Vinita, ve-ne'ta.
Vistula, vist'yoo-la.

W.

Wabash, waw'bash.
Wā-satch'.
Washita, wosh'e-taw.
Wener, wā'ner.
Wichita, wish'e-tā.
Willamette, wil-lā'met.
Win-ne-bā'go.
Winnipiscogee, win-ne-pe-saw'-
ke.
Wl-no'na.
Worcester, wóós'ter.
Wy-o'ming.

X.

Xenia, ze'ne-a.
Xingu, shing-goo'.

Y.

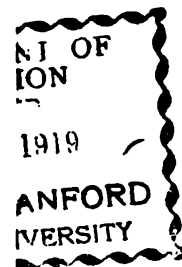
Ya-kootsk'.
Yang-tse-Kiang, yāng-tse-ke-āng'.
Yā-zoo'.
Yem'en.
Yenisei, yen-e-sā'e.
Yo-ko-hā'mā.
Ypsilanti, ip-se-lan'te.
Yukon, yoo'kon.

Z.

Zambezi, zam-bā'ze.
Zanguebar, zan-gā-bar'.
Zan-zi-bar'.
Zuyder Zee, zi'der ze.

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